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Bridging the gap between planning and architecture: a closer look at design collaboration

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**Bridging the gap between planning and architecture: A closer look at design
collaboration**

by

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A thesis submitted to the graduate faculty

in partial fulfillment of the requirements for the degrees of

MASTER OF COMMUNITY AND REGIONAL PLANNING

MASTER OF ARCHITECTURE

Co-majors: Community and Regional Planning; Architecture

Program of Study Committee:

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CHAPTER 1

Architecture and planning have different audiences. Architects have often been considered to be concerned with wealthy clients and high design, while planners have often been considered urban reformers. In fact, architects have not always been available to the lower class. For instance, in renaissance Europe, architects were commissioned mainly by the church and wealthy families. Very few architects designed for the lower class. Today, however, it is possible to provide high design without high cost if the two professions of planning and architecture collaborate. The focus of this thesis was on inter-disciplinary collaboration in design, specifically collaboration of architects and planners: what it is, how it works, and where it exists. My goal for the research was to analyze organizational conditions that facilitate collaboration in urban housing and establish a basis for creating guidelines for future projects.

This project prioritized the gathering of evidence in order to advocate for the use of collaboration in urban design. The methodologies employed in this study were based on historical and archival information and interviews with professionals in the built environment. My investigations began with the assumption that theorists of collaboration in urban design shared a basic understanding of the term: work done jointly by separate individuals and organizations. My project explored one approach that included analyzing conditions to gauge the level of collaboration exhibited in a

specific project. My presumption was that organizations could develop a process, based on a number of issues, in order to facilitate collaboration in the workplace.

The collaboration process has typically been part of business operations and management principles throughout history; however, it has only vaguely been spoken about in urban design and collaboration between planning and architecture.

Therefore, in order to determine if collaboration was used and how it was used in inter-disciplinary design, a basic understanding of the term was required. Over the years, many theorists have given the term different definitions depending on the professional field it was applied to. However, much prior research suggests that the term collaboration means work done jointly by two or more individuals or organizations. This generalized definition was an important part of most the theories studied. More specifically, collaboration meant that these organizations worked together on a parallel level in order to accomplish ones task.

Historically, design collaboration has scarcely been written about, therefore one task of this paper was to address how the lack of documentation provided a venue for conversation to begin. I did this by analyzing the different theoretical definitions of the word collaboration. Analyzing how typical design projects have been managed, and establishing a definition that could be applied to urban design.

Another task of this paper was to analyze previous models created to facilitate collaboration and evaluate their application and potential in practice. The model focused on in this research was created by Danielle D'Amour for collaboration studies in health care in Canada. This model broke down collaboration into four organizational conditions that facilitated collaboration within the Canadian health

care delivery system and which seemed to hold promise for their application to the design field. I hypothesized that applying or appropriating D'Amour's model and modifying this model to look at case studies of the process of several urban housing projects involving planners and architects, would result in an expanded understanding of collaboration between two design disciplines. The final task of this thesis was to understand how different organizations promoted and used collaboration in the workplace.

In order to answer my questions, research on the design process, particularly the role of project management in the built environment was gathered. The American Institute of Architect's (AIA) analysis on the typical role responsibility was studied, and research on the general use of collaboration was also collected. I chose to focus on collaboration in urban housing in order to provide a comparative analysis for my study. Housing, not houses, provided an important context in which inter-disciplinary collaboration between architects and planners could be necessary because it involved negotiating the two different scales of the built environment which are the primary realms of these two professions- the larger neighborhood or community scale and the individual building scale.

FINDINGS SUMMARIZED

After completing the research, I confirmed that the model designed by D'Amour was applicable to examining issues that involved better understanding the

process and collaboration of architects and planners involved in designing housing and community development projects. My research supported that organizations with clear and explicit directions moved through the project more smoothly than the organizations with less direction. Each case I studied had a different approach to organizing their collaboration; however, each group felt their collaboration was indeed successful.

Now that the research is completed, I am satisfied with my findings but curious to learn more. If this study were continued, it could be used to help collaborative teams analyze their collaboration, or create specific guidelines for collaboration of their organizations with other organizations, therefore expanding collaboration in the design fields. This research was a much needed addition to literature on collaboration in the built environment. There has not been much work done that addresses collaboration between planning and architecture, and this bridge bringing a model from the health care industry to the field of design expanded our knowledge of collaboration.

This study was organized into seven chapters. In Chapter 2, I review the relevant literature, and in Chapter 3 I describe the research methods. Each case study has a chapter dedicated to it, beginning with Chapter 4 and ending with Chapter 6. These chapters explain the project and case findings. The final chapter, Chapter 7, discusses the conclusions from each case and the research as a whole. It discusses how this research has added to the design community as well as what changes could be made in future studies.

CHAPTER 2

There were two main categories of literature material in this study: general collaboration and project management literature. First, it was important to understand how typical projects in the built environment are organized; this was done with literature on project management. This expanded on why project management is the key aspect of the design process and plays a central role in collaboration. Second, it was important to understand prior research on general collaboration so that a working definition could be established.

PROJECT MANAGEMENT LITERATURE

The project management literature focused on professional practice and came from multiple locations. Demkin's (2001) handbook looked at professional practice and the multiple ways to negotiate a project. Other research came from well-known authors like Dana Cuff and Andrew Pressman, who have written about architectural professional practice. Pressman's (2006) criteria of a good project manager played a major role in understanding this section of research.

Early in the professions the design process was centered on the master builder and lone genius. Collaboration was not considered and the process was managed by a single person. Contemporary design practices though no longer include this view and the job of the project manager today is to organize, coordinate, and collaborate with all of the involved groups (Pressman 2006).

Some scholars who have focused on research in professional practice saw project management as an integral piece in a successful building project, like in collaboration projects (Pressman 2006). Andrew Pressman claimed that the most intriguing thing about project management was the variety of people with which one dealt. Clients, consultants, suppliers, contractors, and other staff all belonged on that list. According to Pressman, “these different groups and all of their agendas must be coordinated during the complex process of transforming a program into a building” (Pressman 2006). Martha O’Mara stated that as a team leader one must be able to work effectively with all involved and direct efforts where needed (Pressman 2006). Additionally, Jeremiah Eck, stated that a project manager cannot simply perform well but similar to collaboration, there was a human component involved that must be considered. If players on a team could not work with one another, then the task at hand could not be accomplished. It was the project manager’s duty to facilitate the team in accomplishing the task (Pressman 2006).

Another author, Dana Cuff studied project management and collaboration. Cuff claimed that in most projects there was a collective process made up of individuals representing the architect, client, consultants, and sometimes, the occupants (1991). In these projects the client and the architect remained central to the process and involved a project manager. Cuff (1991) pointed out how this had not always been the case, citing that in 1927 Briggs wrote an article claiming that every building of merit was done by a single architectural genius. This belief of Briggs went against what most believe today about project management and collaboration.

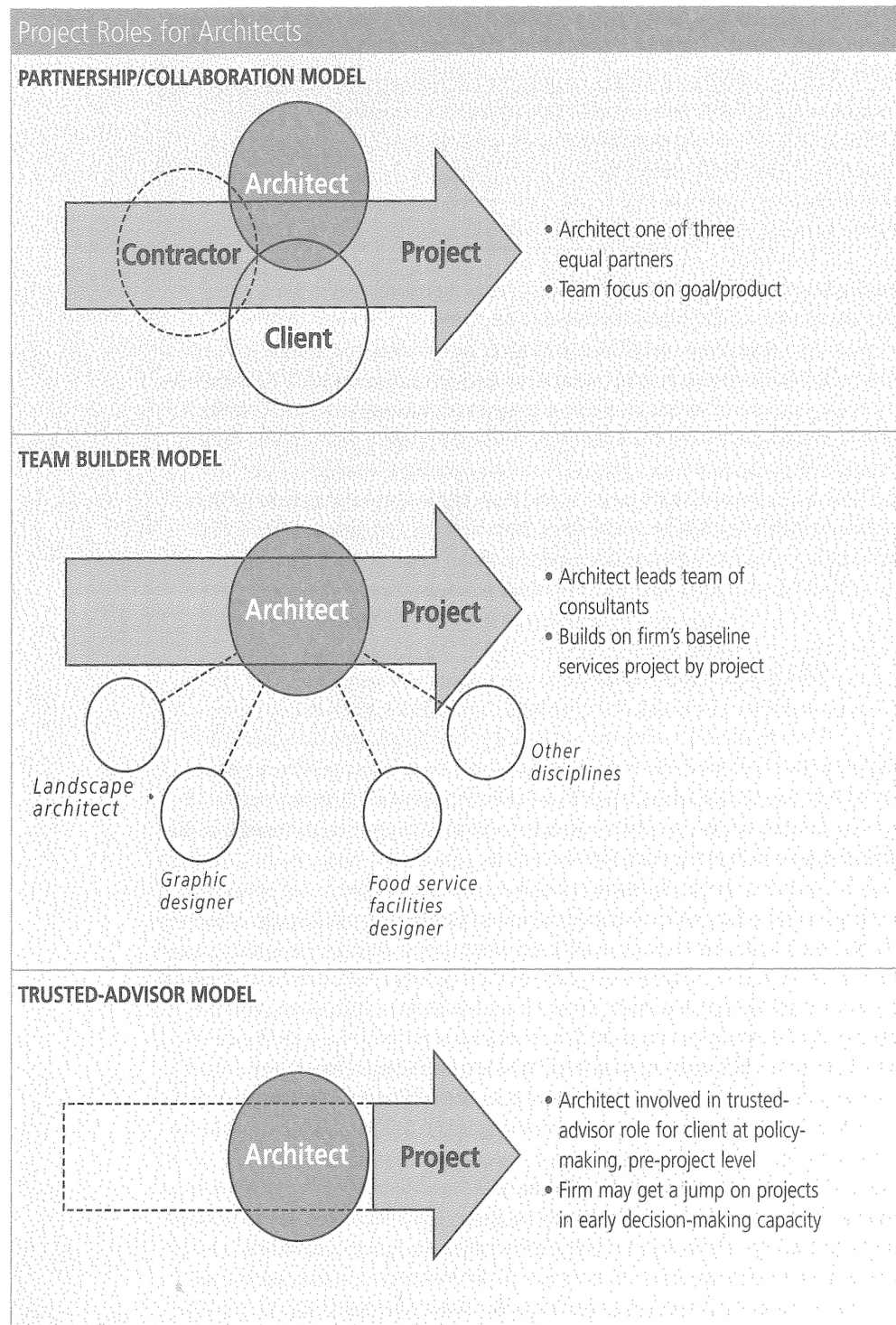
Yet, it is true that only within the past 40 years has project management in a collaborative fashion become popular.

In Cuff's 1991 book, she compiled a list of attributes that a project manager should have in order to establish excellent practice. These attributes included quality demands, simplicity within complexity, stereovision, flexibility with integrity, and teamwork with independence (Cuff 1991). These attributes were similar to the criteria that Pressman said all good project managers should exhibit. Pressman's criteria included the following (Pressman 2006):

- Negotiate contracts with clients
- Consult with clients on project development
- Prepare and monitor the project schedule
- Document project time and progress
- Monitor the processing of phases
- Administer construction contracts
- Participate in project construction progress meetings and prepare reports
- Monitor project staff

The criteria listed above contributed to what Cuff and Pressman considered good design practice. Some of these attributes have been used to determine successful collaboration practice as well. Depending on the project and how the roles were assigned on a particular case, collaborators often worked as joint project managers, these vary between projects. The American Institute of Architects (AIA) developed three role responsibility models that address most typical projects (Figure 1). They are the partnership/collaboration model, the team builder model, and the trusted-advisor model (Demkin 2001).

Figure 1: American Institute of Architects' Project Roles



The partnership/collaboration model was based on the notion that a firm and its clients approach every project with common values and goals (Demkin 2001). It included an understanding that the firm and its client played different roles and carried different responsibilities but did so in an equal partnership (Demkin 2001). The aspirations were unified and the priorities of the projects were understood.

The second model was the team builder model, which envisioned expansion of a firm's role and responsibilities for projects with extensive requirements, yet expanded these responsibilities without fundamental changes to the firm's structure (Demkin 2001). As the projects became more complicated, the areas of expertise went beyond what the firm could provide and consultants were added. Teaming between groups like these helped firms create relationships that proved fruitful in future projects.

The third model proposed by the AIA was the trusted-advisor model. This model included firms that sought to be a part of the facility decision-making and the policy-making processes. Firms that have worked in this model have often received a jump start on projects early in the decision-making process (Demkin 2001).

From the above models, the first, partnership/collaboration, exhibited what most theorists believe to be good project management, and as seen below, is similar to existing research has stated about collaboration. The second model, team builder, also had properties that exhibited good project management and collaboration. However, the third model, trusted-advisor, had very little qualities that resembled collaboration. Understanding any project's design process requires understanding of how that design process follows one of these models, if any. The project

management literature helped me understand how the quality of good relationships among key participants working together impacts the final result.

COLLABORATION AND PARTICIPATION LITERATURE

The majority of the literature studied was on general collaboration. These different articles defined the term collaboration, as well as identified the movement's main objectives of working with multiple organizations to accomplish a task. There were three main ideas within this section. I started with definitions from various theorists, then explained the requirements for collaboration and finally, and ended with concepts of collaboration.

Henneman, Lee, and Cohan (1994) claimed that collaboration was “a complex phenomenon whose definition has remained vague and highly variable despite its elusiveness.” And this lack of clarity of the term has resulted in it often being used inappropriately for research and practice. This made establishing a solid definition difficult. The origin of the word is Latin, and *collaborate* is derived from the Latin word *collaborare*, which means to labor together (Henneman, Lee, and Cohan 1994). Many definitions have included the idea that collaboration was work done together by differing organizations (Henneman, Lee, and Cohan 1994, Rodriguez, et al. 2005).

Despite some commonalities, theorists have studied collaboration and assigned their own differing definitions to the term. Henneman, Lee, and Cohan (1994) stated that collaboration was a process that stressed joint involvement in intellectual activities. Two other theorists, Wood and Gray (1991), developed their own definition that claimed collaboration was the process in which a group of

autonomous stakeholders engaged in an interactive process, using shared rules and structures to decide issues. Their definition was similar to Henneman's in that it was work done during an interactive process, but Henneman's definition also spoke about intellectual decision making, where Wood and Gray's did not.

Other researchers, Thomson, Perry, and Miller (2007), studied collaboration in oil production and found that "collaboration was a process in which autonomous actors interacted through formal negotiation, jointly creating rules and structures governing their relationships to act on issues that brought them together" (Magdaleno, et al. 2007). The fourth definition of collaboration I included in this analysis was established by Michael McGuire and included in O'Leary and Blomgren Bingham's book (2009). McGuire stated that "collaboration was an act of managers facilitating and operating systems in multi-organizational, networked arrangements to solve problems that cannot be solved, or cannot be solved easily, by a single organization." This definition addressed issues that prevented a single entity solving a problem, but instead required multiple organizations to work together. McGuire's view on collaboration was similar to Huxham's (1993), who believed collaboration achieved something individuals could not achieve alone.

Four theorists I studied, Rodriguez, Beaulieu, D'Amour and Videla (2005), agreed with many other theorists including Henneman, Lee, and Cohan, and all discussed the sharing of responsibilities and the sharing of decisions in the collaborative process. However, still other theorists believed it was simply partnerships between two or more participants. The definition of collaboration that I used in my research was the one used by Danielle D'Amour (2008). Her own

definition of collaboration conveyed an idea of sharing and implied collective action toward a common goal (D'Amour 2008).

Though each of the above definitions was slightly different, most of the theorists believed that there were two requirements for collaboration: the voluntary nature of collaboration and negotiation required for collaboration and the difference between collaboration and teamwork. Most of the theorists agreed that collaboration was a voluntary act and not one that was forced. Organizations that engaged in collaborative processes did so voluntarily, and they negotiated most decisions with the second organization working with them (Rodriguez, et al. 2005).

Second, researchers agreed that collaboration was different from teamwork. According to the authors, teamwork was a spectrum where at one end there was total collaboration, but at the other end there was none (Rodriguez, et al. 2005). On the end that exhibited collaboration, professionals intervened on a parallel basis, creating a parallel practice (Rodriguez, et al. 2005). On the other, professionals entered the team with different amounts of power, and one participant acted as manager, leading to teamwork but less collaboration.

The same four theorists as mentioned earlier, Rodriguez, Beaulieu, D'Amour and Videla (2005), uncovered certain concepts that were mentioned repeatedly in the literature of collaboration. Four of these common concepts were sharing, partnership, interdependency, and power (Rodriguez, et al. 2005). Clarke and Smyth (1993), discussed not only these four but also included interdependency, the act of mutual dependence between the participants. Finally, the concept of power was addressed and was conceived as shared among team members by Rodriguez et al. 2005. These

scholars all considered collaboration to be a dynamic process and one that was constantly evolving (Rodriguez, et al. 2005).

There have been other theorists in the last 40 years who also believed there were other concepts that must be included in order to facilitate good collaboration. Magadaleno reported that Clarke and Smyth (1993) and Marwell and Schmitt (1975) each listed concepts that they believed made collaboration in the workplace easier. These concepts were goal-driven behavior, a reward system, distributed responsibilities, and coordination (Magadaleno, et al. 2007). All of the above listed theorists believed that organizations that exhibited these concepts had better collaborative teams.

As seen from the previous paragraphs collaboration has not yet been fully understood: hence, its definitions are primarily theoretical (Henneman, Lee, Cohan 1994). In 2008, one theorist D'Amour, after completing much preparatory research on concepts of collaboration, described organizational conditions and established a model based on criteria that she believed would facilitate collaboration in the workplace. I used her criteria in my study.

D'Amour's research was supplemented by other scholar's theories and based in health care. Her model was established to help physicians and health care organizations work together to create better research and patient care. She developed a structured model of organizational conditions that facilitate collaboration. Within this structured model D'Amour established criteria that existed within the conditions, she called these criteria "elements". These elements were used to analyze health care facilities offering prenatal services for regions in the province of Quebec (D'Amour

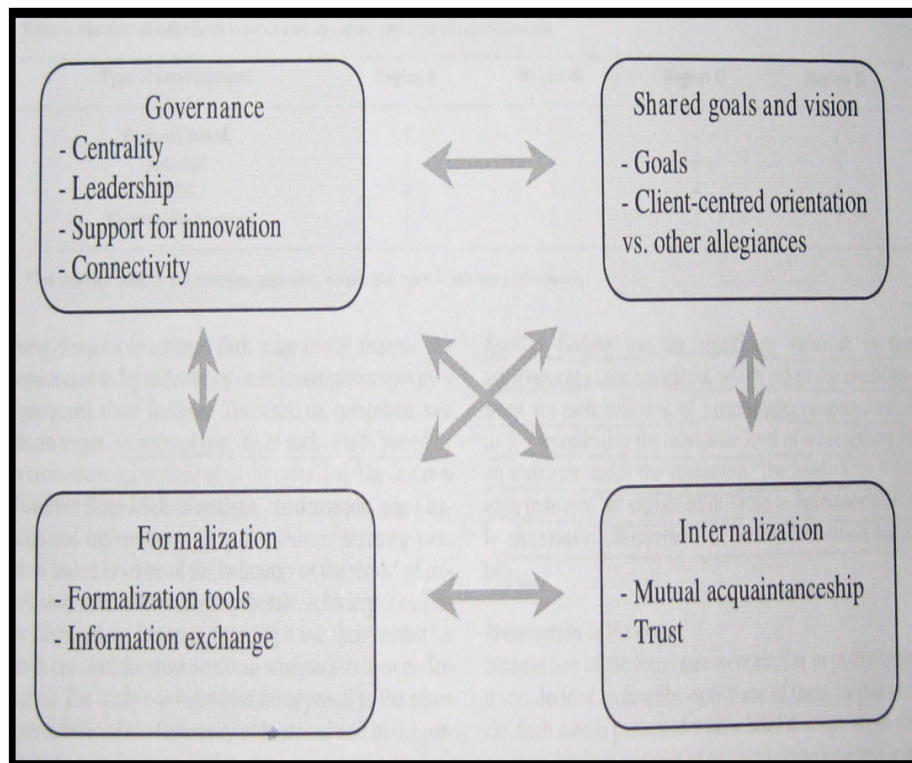
2008). D'Amour's model focused on the working relationships between collaborators, the underlying goals of both the client and the project team, and the contractual partnerships developed.

D'Amour's model suggested that organizational conditions could be analyzed in terms of four dimensions (Figure 2) (D'Amour 2008). D'Amour's model was tested by researchers in Quebec to validate the four dimensions and the 10 elements shown below.

In order to validate her model, a team of researchers conducted 33 semi-structured interviews with health care managers and professionals (Goulet, Labadie, and Pineault 2008). The data were then subjected to inductive analysis, and the results showed that the criteria established by D'Amour were valid (Goulet, Labadie, and Pineault 2008).

The four organizational conditions of D'Amour's model were Governance, Shared Goals and Vision, Formalization, and Internalization (D'Amour 2008). Each of these conditions exhibited different criteria that could be used to assess or measure the presence and depth of the conditions. Two of these conditions, Governance and Internalization, dealt with collaboration within each organization, and two conditions, Formalization and Shared Goals, dealt with collaboration between the participating organizations. The first condition, Governance, described the leadership functions that support collaboration within the organization (D'Amour 2008). Governance measured the direction given to those involved. According to D'Amour, the project managers provided these leadership functions and implemented innovations related

Figure 2: D'Amour's (2008) organizational conditions that facilitate collaboration.



to inter-professional and inter-organizational collaborative practices.

The second organizational condition, Shared Goals and Vision, referred to the existence of common goals between collaborators and their effectiveness within the team (D'Amour 2008). This condition dealt with collaboration between organizations. Shared Goals and Vision included the recognition of similar motives and allegiances regarding the project.

The third condition, Formalization, referred to the clarification and formal understanding of agreements between the different organizations (D'Amour 2008). For instance, whether or not there was a formal contract involved or simply a verbal agreement?

Finally, the fourth condition that D'Amour described in her model was Internalization. Internalization referred to the relationships of the involved professionals and managing those relationships within the organization. This included whether there was a sense of belonging and knowledge of one another's values (D'Amour 2008).

Each of the four conditions D'Amour described were criteria that existed within the project and served as benchmarks for measurement. Governance described four elements. These were Centrality, Leadership, Support for Innovation, and Connectivity. In this research, Centrality referred to how the partner/president of the organization kept the manager involved in the decision-making and project development. Different from Centrality was Leadership, which referred to the daily tasks and how these were accomplished. The difference in the two elements existed in the level at which the interaction happened (D'Amour 2008). The third element of

criteria was Support for Innovation. D'Amour based her research in health care and it referred to new research and tests for diseases. The final element within Governance was Connectivity, which referred to how the professionals created bonds and communicated (D'Amour 2008). This element portrayed how important it was to promote pathways for communication.

The elements described within the second organizational condition, Shared Goals and Vision, were Goals and Client-Centered vs. Other Allegiances. The definition of Goals was simple; it referred to whether or not the collaborators had shared goals. The second, Client-Centered vs. Other Allegiances, presumed that the different organizations collaborating had different motives to do so (D'Amour 2008).

The third organizational condition was Formalization, and in it D'Amour described two criteria: Formalization Tools and Information Exchange. Formalization Tools meant clarifying the various professionals' responsibilities and negotiating how these responsibilities were shared (D'Amour 2008). Information Exchange referred to the information infrastructure that was used and the allowance for rapid and complete information and communication exchange.

The final organizational condition that D'Amour described was Internalization. This, like Formalization, had two elements within it: Mutual Acquaintanceship and Trust. Both of these elements related to how well each of the collaborators knew one another and how comfortable they were in one another's company.

These 10 criteria described by D'Amour provided insight into the organizational conditions that she hypothesized would facilitate collaboration.

Having studied her model extensively, I discovered that D'Amour's ideals resembled ideals used in architecture and planning, and I suspected that this method could be used to measure collaboration between planners and architects.

However, before this model could be directly applied to urban design, there were issues that needed to be addressed. There were differences in the two contexts studied, D'Amour's study was in the context of health care and my study was in the context of urban housing design. There was also a difference in location; D'Amour's was in Canada and mine was in the United States. Canada's operations systems, especially those in healthcare, are different from the United States. In the United States many building projects, including those in this study are funded by private organizations, giving certain participants more money and therefore more power, and in turn affecting collaboration. This may not have been the case in D'Amour's research where the funding may all stem from a single source. Theorists have stated that in collaboration the individuals involved in the process should be nonhierarchical and power should be divided equally (Henneman, Lee, and Cohan 1994). In most typical urban design projects, the participant with the most funding has the most power and a nonhierarchical system is not realized. Funding affected each of my projects individually and it was important to understand the power arrangement in each of the three cases studied.

The third criteria, Support for Innovation, also had to be translated from D'Amour's model. While in her model this referred to new research and tests for diseases I used innovative ways to build and promote housing as a test for this criterion. Additionally under Goals the criteria of Client-Centered vs. Other

Allegiances referred to individual research agendas for D'Amour and in my research this criteria was translated into the different agendas of the agencies, the user groups, and the professionals involved in the collaborations for the case studies.

The literature on project management and collaboration provided an understanding of the history of both topics. D'Amour's model led me to an understanding of organizational conditions that facilitate collaboration and provided a model that I could apply to begin research on collaboration between the fields of planning and architecture.

CHAPTER 3

In order to answer the research questions, I used a model designed by Danielle D'Amour, as explained in the previous chapter (D'Amour 2008). The first set of research questions included the following: What forms of collaboration have been used by design and planning firms? And, how have these collaborations been organized? These were both answered using D'Amour's model as a basis for research. I used the elements described in D'Amour's organizational conditions to measure how the participants interacted during the planning and development process.

My second set of research questions addressed whether D'Amour's model could be applied to urban housing design and whether the results could provide managers with organizational guidelines to promote collaboration. I spoke with participants from many companies and learned about the relationships between team members and how those relationships affected the process. In the end, I determined whether or not the partnerships exhibited the qualities that D'Amour established.

CASE SELECTION

In order to study the conditions of collaboration in examples from practice, I employed a qualitative case study research method, which included multiple cases. Three cases were chosen and participants were interviewed from each organization. It was important to find cases that included partnerships in relation to urban housing

issues, because urban infill housing was the tract I chose to analyze using D'Amour's model. Kansas City offered a large urban area with a variety of urban housing projects to examine and because I lived in the area, proximity allowed a foundation to begin work.

The three cases were chosen so that each could be studied in detail and provide a base for comparative analysis. Each of the three cases was an urban infill housing project that had been completed in the Kansas City area within the last three years. The project timeline for each varied in length between two and 14 years. Each case had a project architect and an agreed-upon partnership with a non-profit planning entity. Each non-profit entity was considered a federal Community Development Corporation (CDC) working in the building sector. The project manager on the case within the CDC was an urban planner. Therefore, the direct collaboration in each housing project was a joint partnership between an architect and a planner. This was the partnership I studied.

The scale of the projects varied. There was a large-scale housing project that included over 100 housing units, a medium-scale housing project that included 40 housing units, and a small-scale housing project that included five units. The type of housing unit varied from single-family units to multi-family structures. All three projects were praised by the media and press.

The first case, Case A, was the large-scale housing project located in Kansas City. Case A included over 100 planned units of urban infill housing on a single site. More than 50 have been completed and sold in the past three years; the remaining units were still under construction, having been delayed due to economic reasons.

Case A was designed by an architect working for a non-profit company in Kansas City that partnered with a non-profit neighborhood association.

The second case, Case B, was a 40-unit urban infill housing project that was completed in May 2007. Case B was completed by an architect who specialized in urban centers and was done in partnership with a long-standing CDC that has specialized in low-income urban housing.

The final case, Case C, was completed in 2008 and, at the time of writing, had not sold. This case was the smallest case, as it included only five single-family units. The homes were designed by an architect who had worked with non-profit builders for more than 20 years and was done in partnership with a CDC that focused on low-income residents in Kansas City.

Each of the three cases brought its own challenges concerning collaboration, and no two projects were alike, but all were equally engaging and interesting.

MEASUREMENT STANDARDS

After studying the model designed for health care by D'Amour, I decided this was a model that could be translated to collaboration for urban housing. D'Amour's model focused on four organizational conditions and ten elements that existed within. I took those elements and formed questions that could be asked of urban housing projects. From these questions, I measured whether or not the element was included in the project. After giving each element a score between one and three, my conclusions were based on how well the project exhibited qualities that D'Amour

believed facilitated good collaboration. The following chart shows D'Amour's elements and how I applied them to urban housing design (Figure 3).

D'Amour's model of organizational conditions provided a plotted chart (Figure 4) that represented the measurement on each of the elements. Once all 10 elements' measurements were plotted, the result was a tri-level typology that described the collaboration (D'Amour 2008). The highest typology was Active Collaboration, which was given to projects that scored threes on the 10 elements. The middle typology referred to Developing Collaboration, which showed a project that had collaboration but also had areas of improvement and scored twos. The lowest level of typology, according to D'Amour, was Potential Collaboration. This low level of collaboration showed that it was possible for those involved to collaborate; however, not much effort towards collaboration had been displayed. D'Amour believed that determining a level of typology could help each organization recognize their own strengths and weaknesses and enable them to develop guidelines to promote better collaboration on future projects (D'Amour 2008).

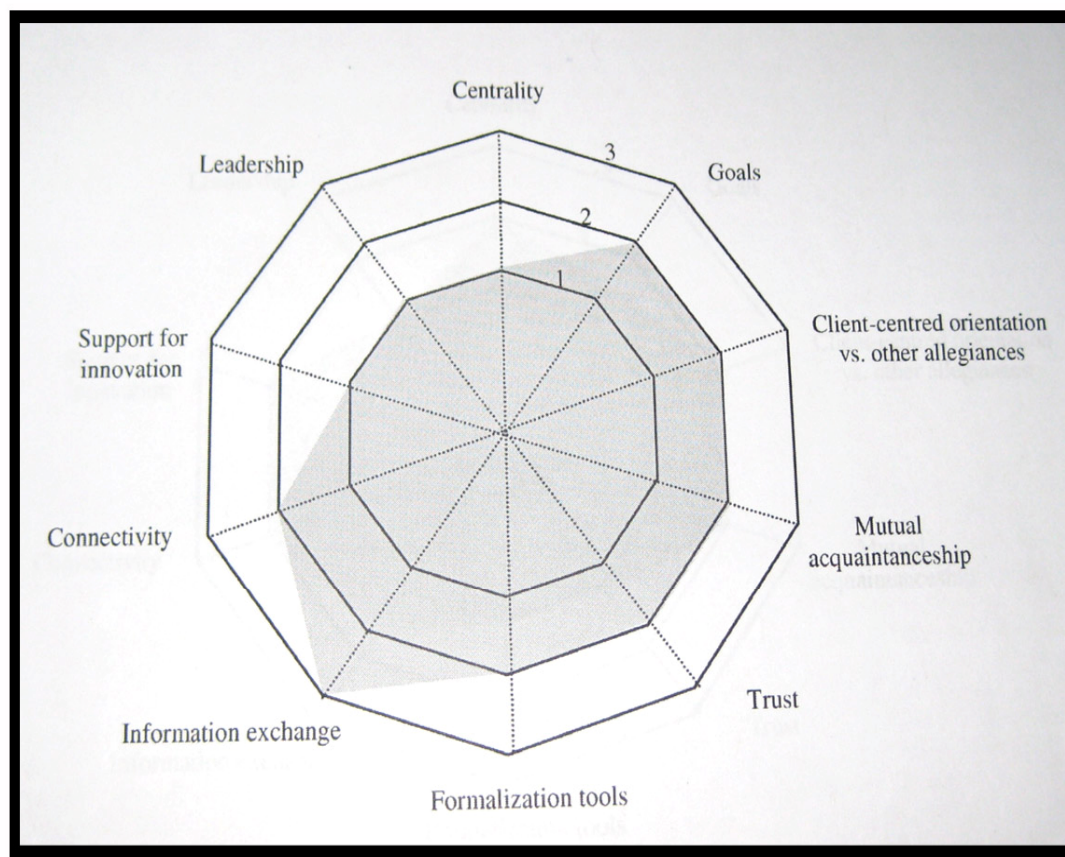
After translating D'Amour's concepts, some needed to be adapted in order to fit my own research design. The major concept that needed to be addressed was the difference between health care in Canada and housing in Kansas City. The last research question was developed from this: Can D'Amour's model on collaboration be applied to housing design in Kansas City?

There were many differences between Canada's health care system and housing in Kansas City. Funding was the largest; most of the collaborators in projects

Figure 3: D'Amour's measurements adjusted for my collaborative analysis

Indicator	Description
Goals	Whether or not the architect and planner have the same underlying goals. Do they want to accomplish the same thing?
Client-Centered orientation vs. other allegiances	Presumes that there generally exists a complex structure of interests involving different types of allegiances. In these cases, it can be allegiance to the profession, to the client, to the user-group, or to the organization itself.
Mutual Acquaintanceship	How well the architects and planners know one another and whether or not the two organizations feel comfortable working with one another in a cross-disciplinary study.
Trust	Does the architect trust the planner? Does the planner trust the architect? Does trust exist in the project between the organizations?
Centrality	Refers to how the partner/president of the organization worked to keep the project planner/architect involved on decisions, during the planning process.
Leadership	Refers to how the project planners/architects worked with one another and other employees on the daily tasks.
Support for Innovation	Does the team develop projects that are sustainable? Whether or not both the architect and planner involved are dedicated to innovative techniques of design.
Connectivity	Are the architect and planner inter-connected in decisions? Do both professional fields contribute equally to discussion?
Formalization Tools	Have the professional responsibilities been clearly identified? Whether or not there was a formal contract included in the negotiation between the organizations; most often being an AIA contract.
Information Exchange	What was the information infrastructure used in the process? This could be REVIT, Auto CAD, information databases, ect. Did these programs allow for rapid and complete information exchange?

Figure 4: D'Amour's 10 indicators plotted on a concentric graph, with an example of results in grey.



in D'Amour's model received funding from the same source. This translated into similarities in the underlying allegiances in the project. In Kansas City however, funding came from both private and public sources. Often the participants on the collaboration worked for different companies. In my research, funding came from private design companies, non-profit sources, and state tax programs. Each situation had a unique funding source that complicated the organizational structure. This was unlike most of the cases D'Amour studied. A separate study in the future would be beneficial to determine how funding affected the collaboration structure. For my research, an organizational diagram for each case was included in the analysis to help explain the source of funding.

Another concept addressed was that D'Amour's four organizational conditions would be better understood if separated out by type of interaction: Which type of interaction does the area of research apply to? In this research, I had multiple types of interaction. There was interaction within the organization, interaction between organizations, and interactions between participants on the project. It was difficult to directly link each of D'Amour's conditions to a single type of interaction, so they were slightly adjusted. For my study, Governance dealt with the interaction within the organization, Formalization was interaction between organizations, Shared Goals and Visions was interactions between organizations as well, and finally, Internalization referred to interactions between participants involved in the project.

On top of her research, some of D'Amour's ten elements needed to be adjusted as well; for instance, Centrality and Leadership were difficult to understand. In this research Centrality referred to how the partner/president of each organization

worked to keep the project planner/architect involved on decisions. Leadership was similar, but the collaboration here was between different participants: this referred to how the project planner/architect worked with each other and the other employees to accomplish daily tasks.

A third element that was problematic was Support for Innovation. The definition of the term was blurry, in healthcare this could mean clinical research, but in the built environment it could mean many other things. Since this study was designed for the built environment, Support for Innovation should have ideally included two parts, one part for sustainable or other types of design innovation and another for organizational innovation. My research used the definition of sustainable innovation to measure the element; however, if this research were to be built on, other types of design innovation as well as organizational innovation should be included.

DATA COLLECTION

Data was collected through interviews. The interview questions were written based on the 10 elements. There were approximately 15 questions referring to the organizational conditions D'Amour proposed (Appendix A). Each interview was conducted on an individual basis, and no interview lasted more than one hour. I met with each professional once. Background information on each case was determined from previously published material.

In each case, interviews were conducted with all key players. There was a lead architect, a project manager who was also the urban planner, and, in one case, two other players involved in the planning process. All of the data collected from the

interviews was kept confidential. No names or organization names were disclosed in this paper. When the architect/planner was discussed, a nickname was given to the participant, such as Architect A, regarding the architect in Case A. This research was approved by the Institutional Research Board at Iowa State University and does follow all necessary guidelines. Refer to Appendix D for IRB approval.

After each interview was conducted it was transcribed and analyzed. Next, the interviews from each case were analyzed in relation to one another. A number between one and three, one being the lowest level and three being the highest was assigned to each element based on my judgment from the answers given. An organization that had no reference to the element received a one, an organization that had some reference to the element received a two, and an organization that had much reference received a three. These guidelines were based on my own analysis of the interview. Some of the elements related to organizational conditions that defined the organizational collaboration, and some related to conditions that defined project collaboration.

The ratings were then plotted according to D'Amour's graph. The results allowed easy visual assessment of the collaboration's existing typology. Finally, the three graphs, one from each case, were compared to one another, and the results referred to the three levels of typology established by D'Amour.

The following three chapters cover the specifics of each case and how each case was individually examined, and chapter seven discusses a comparison of the cases. Chapter seven also discusses in what ways I found D'Amour's model on collaboration applicable to studying collaboration in the design of urban housing.

CHAPTER 4

INTRODUCTION TO THE CASE

As stated in the previous chapter, Case A was the largest case in the study and included over 100 housing units of both low and moderate density. There were single-family units, townhomes, and multi-family structures included in this development. Case A included four sub-projects, one of which was successfully completed. The planning process for this sub-project began in 2000, and construction began on the first project in 2004. The first, an infill housing project, was situated on a 30-acre site encompassing approximately six city blocks. Despite the blighted sub-project area, there were still a significant number of residents living there when the planning process began. The first steps in this sub-project were to demolish vacant buildings, remove the blight, and build new infill housing. Of this infill housing, 75% was aimed at low- and moderate-income families, and the remaining 25% was aimed at the fair-market rate buyers.

The second sub-project was for townhomes. Construction has begun on 25 of the 50 townhomes, and the first 25 were completed last year. One hundred percent of the built townhomes were rented, many to the Kansas University (KU) medical students who lived in the area. The idea of a townhome was new to the community. One of the interviewees noted that before the construction and sale of the townhomes, the residents considered a townhome to be a temporary rental unit that did not need or deserve their care. However, the townhomes in this sub-project have proven to be a popular option for medical students in Kansas City. Architect A believed that this

second sub-project was the hardest project to get approved because of the non-traditional zoning; because there were townhomes and apartments in the design zoning approval was done individually and required a change from the more traditional R-1. However, due to the proximity of The KU Medical School, this change served many residents in the area who had been previously under-served.

The third sub-project within Case A was a development of single-family units surrounding the townhomes. This incorporation of single-family units which were intended to be owner occupied and leased townhomes was part of the master plan that was designed in accordance with the architects. In 2007, construction began on the single-family units in two building phases. The first phase included 20 single-family units, 14 of which have been built and eight of which have sold. The second phase included 32 units.

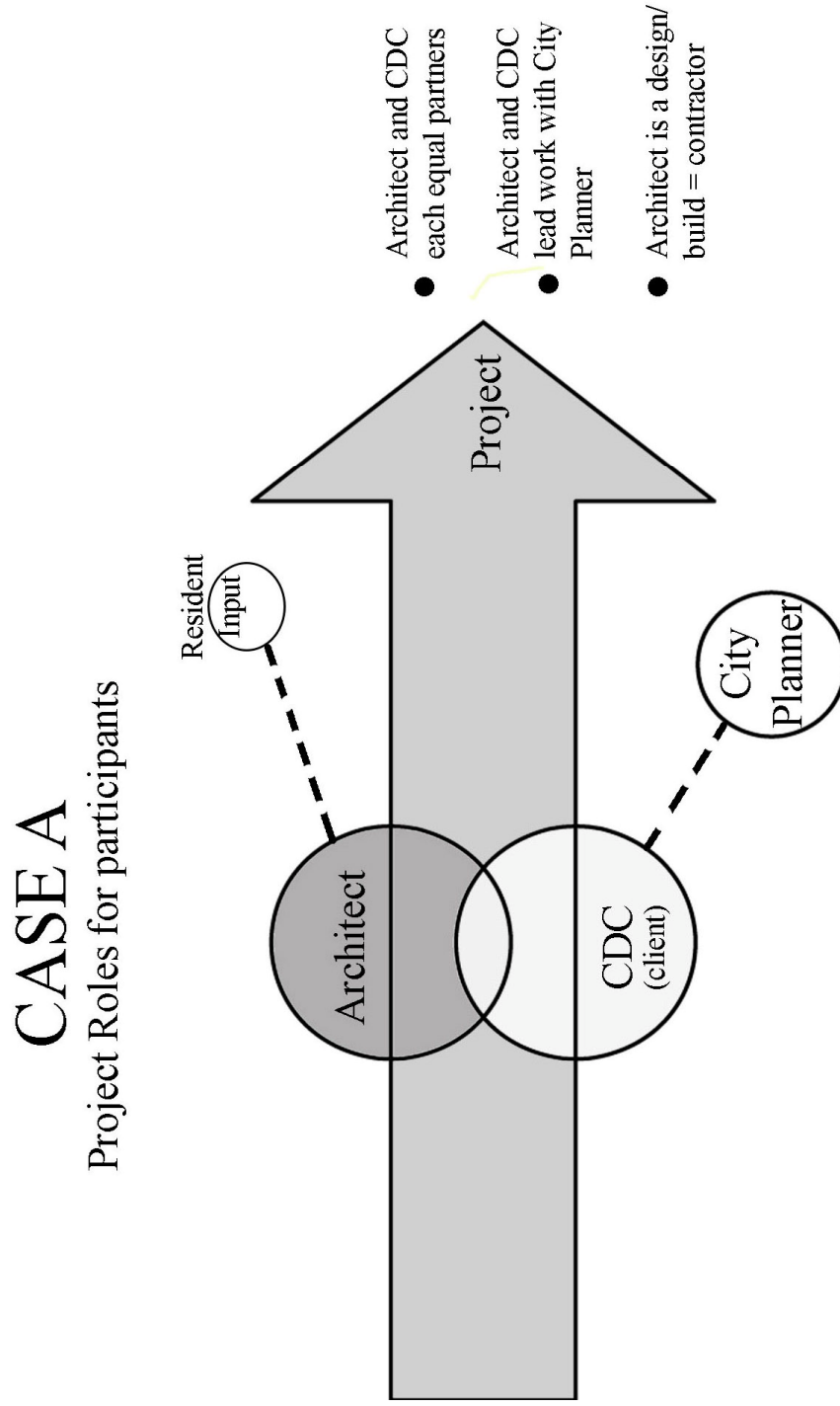
The final sub-project within the area consisted of townhomes for ownership rather than rentals. This building type was designed to be more modern than the others. The master plan had traditional townhomes slated in order to keep the historical integrity of the neighborhood, however the architects added the fourth sub-project to give the development in its entirety a contemporary design. These townhomes will not look like the rest of the development, primarily because the townhomes are designed for a contemporary user group. Architect A's intent was to appeal to KU medical students who want to buy property in Kansas City. The designers anticipated beginning construction on 12 townhomes in 2010; however, due to the current housing market, that timeline may be delayed.

When the development is completed there will be 110 housing units on the 30-acre site, but there will be no commercial development in the neighborhood. The decision to make the development entirely residential was made during the charette phase that included existing residents and the CDC planners. The existing residents felt the integrity of the neighborhood would be lost if commercial development were introduced.

The area for Case A was chosen by the neighborhood association/developer for a number of reasons. They recognized that there was a problem that needed to be solved, and the Case A area was the worst area in the neighborhood. However, Project Manager A believed that no one would want to buy a good house in a bad neighborhood, so the social issues along with the physical issues had to be addressed.

The developer was a non-profit, government-classified CDC and was also the existing neighborhood association for the case study area. This association was an umbrella group for many other neighborhood associations in the community. The CDC chose architects to do the re-development although it was also interested in working with planners for the master plan. The AIA diagrams (Demkin 2001) displayed earlier proposed three types of project roles for participants in any development. Case A was similar to the first model, partnership/collaboration, in that it had equal partners (Figure 5). Although there were several differences in Case A that made the project innovative, the project featured equal partnership between the architect and CDC as well as consultation with the city planner. The architect in Case A was also a design/build organization, so they acted as the contractor which made steps easier for collaboration. Most typical projects described by the AIA model have

Figure 5: The project roles for Case A compared to the AIA Handbook 13th Edition



Similar to the partnership/collaboration model included in the AIA handbook

a lead architect and a separate contractor on the team, involving more parties. Moreover, Case A included collaboration between three different organizations, but it also worked directly with the residents in the area. Public input that was received from charettes was included; however, the major decisions were still made by the three collaborating groups. Case A was a private development, so the funding and financial responsibilities were privately handled.

The project manager for the CDC was a woman who considered herself “an old hippy” who just wanted to make her city a better place to live, and she saw an opportunity in this economically and physically distressed neighborhood. She took it upon herself and her organization to make some positive changes. She brought her idea to the board of directors, who told her to find a builder. At that point the project manager enlisted the services of the design/build architect.

The architect/builder for this case was a non-profit organization that builds and promotes comprehensive re-development in the urban core of Kansas. Since 1992, this non-profit building group has leveraged over \$30 million in investment and has renovated or built more than 200 homes in the central core of Kansas City; this fact alone was significant and made Case A stand out among others. Together with its partners, it was dedicated to the revitalization of the urban Kansas City, neighborhoods. With a focus on distressed neighborhoods and improving those living conditions, it was evident that this group is a planning-based organization, but they have architects on staff who bridge the two disciplines.

The architect’s organization was started in 1992 by three pastors from different churches in the county, all of whom were concerned about the African-

American populations residing in Kansas City. One of the founders is the current Executive Director of the organization and the main contact for this study. But, since 1992 much has changed within the organization, and today it is a neighborhood-based organization rather than a church-based organization. Architect A believed the mission statement for the organization was clear: “it aimed to achieve comprehensive, neighborhood, and economic re-development in neighborhoods within Kansas City, Kansas.”

The final group involved in Case A was the city and its planner. Many variances were applied for and obtained during the development process, and the city planner had an important role throughout the entirety of the project. The city planner had worked previously with the CDC and the designers on developing the master plan, so he felt the process for Case A went smoothly due to the master plan.

When the problem area for Case A was identified and the key organizations had agreed to join together in collaboration, the major goals needed to be developed. The CDC agency wanted to address not only the physical issues but the social issues as well, and it was essential for them to engage the residents throughout the entire process. Both the CDC and the residents of the surrounding neighborhood agreed that a key aspect of the development was that no commercial development be included. The current residents of the neighborhood were good people who had overcome struggle and did not need additional neighborhood problems: therefore the decision to include only residential property was made.

The density level in the development changed multiple times throughout the project, but the architect finally determined that because of Tax Incremental

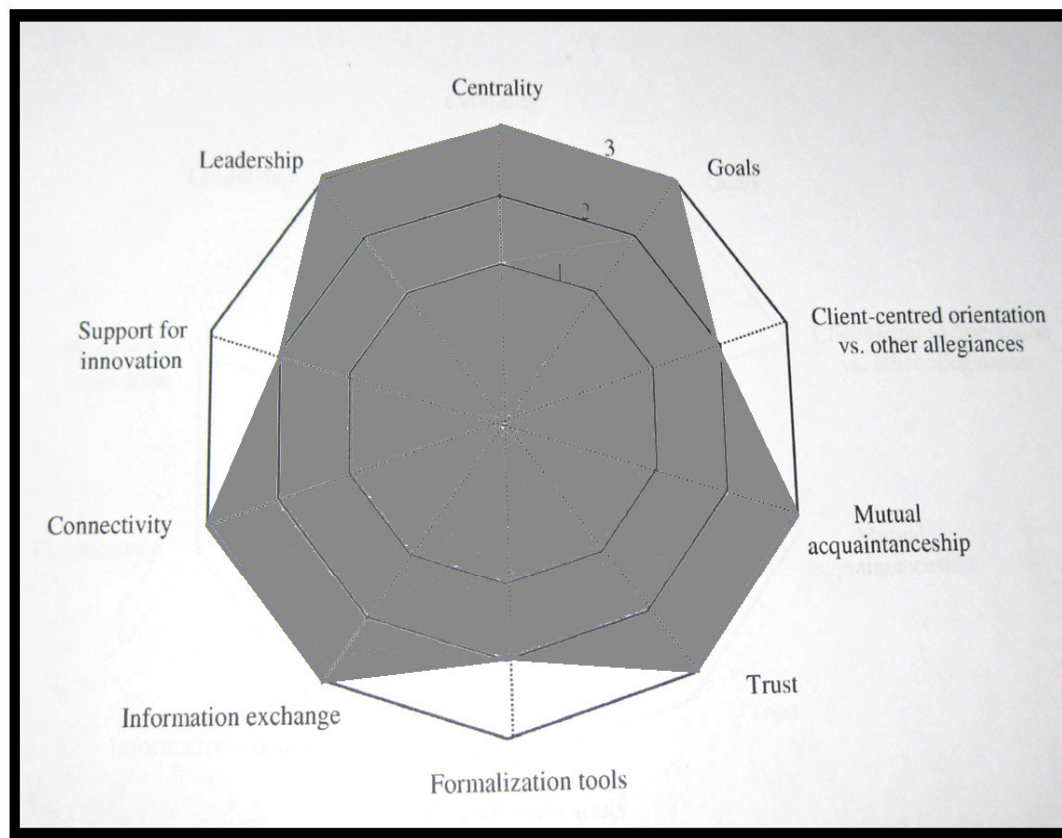
Financing (TIF) money associated with the property, the density of the development needed to be increased to moderate, so it was at this time they added the townhomes to the design. This was proposed to the CDC, and after some discussion everyone was ready to move forward with both low (single family)- and moderate (multi-family)-density buildings. Once the CDC and residents agreed to both townhomes and single-family units, the designers provided them with contemporary designs. In the end, a development plan was done for 110 housing units, made up of approximately 70 townhomes and 40 single-family homes.

DATA ANALYSIS

During my interview process, I spoke with the project manager from the CDC/neighborhood association, the project manager from the design/build team, the project architect from the design team, and the city planner assigned to the case. I learned a lot about Case A from speaking to each. Though most had similar goals and objectives, I learned that everyone had a different holistic perspective about the project. Their varying opinions of different aspects of the project helped me shape a more complete understanding of the development.

D'Amour's model provided me with the tools to ask the appropriate questions and to fully understand the organizational conditions that existed. The following chart shows the results of the ten elements, Centrality, Goals, Allegiances, Mutual Acquaintanceship, Trust, Formalization Tools, Information Exchange, Connectivity, Support for Innovation, and Leadership, plotted on D'Amour's (2008) model (Figure 6).

Figure 6: Findings for Case A plotted on D'Amour's graph.



CASE A

The first organizational condition was Governance. Within Governance, Case A scored threes, the highest number rating, on three of the four elements studied. Dealing primarily with how the given organization is managed, the key players across the board felt that the leadership was strong throughout the entire process. The Centrality element received a three because the team included the clients on the organization's board of directors. Whenever the design team works on a project in a certain neighborhood, they have key representatives from that neighborhood on the board who become voting members. Therefore, in this case, a resident and the project manager from the CDC were on the design organization's board throughout the entire development process. This provided a setting that allowed for all parties' issues to be considered. During the process, the CDC and the area residents had direct input in all major conversations.

The Leadership element was also given a three in Case A. All four of the players interviewed felt they clearly understood their responsibilities for the project. The two project managers, one from the design team and one from the CDC, also knew that they were responsible for directing the players working with them and clarifying with one another the responsibilities. In the end, there was not much confusion between organizations.

The other three received in the Governance category was in Connectivity. This element addressed where and how often the CDC met with the design team and the planner to work through their issues. In the beginning of the project, design charrettes involving the areas' residents were conducted by the planners and the architect to create visions and ideas for the development. These charrettes always took

place on site. During the planning and approval process, many of the meetings were also held on site in an African-American church that sits directly across the street from where the homes were planned for construction. This was intentionally planned to enable residents' access to the meetings because the design team and the CDC agreed that the best decisions would be made when the residents' opinions had been heard. After approval of plans and during the construction process, the meetings were moved to the CDC's and design team's offices. The key players came to different and equal locations for discussion, depending on the current issues.

The fourth element referring to Governance in the collaboration was based on Support for Innovation. This is where Case A did not score a three; rather, it scored a two. Though the idea of joint collaboration between two non-profits working together to develop urban infill housing was in itself innovative, the concept was not explored to the level needed for the highest rating. It also did not promote new innovations of technology during the process; instead, it used the traditional design/bid/build technique common in building. Each organization was proud of the amount of collaboration it used and believed this type of partnership was better for future developments. Overall, the condition referred to as Governance was a success for Case A. All three entities involved showed successful organizational skills, and each player interviewed had positive feedback about the collaboration between the three groups.

The second organizational condition, according to D'Amour's model, was Shared Goals and Visions. This area centered the goals and what direction each organization saw for the project. Case A scored well on this area but not perfectly.

The major goals in the development were clear from the beginning and were stated and defined by the CDC: in order to improve the housing stock in the area, owner-occupied homes needed to be built and owner-occupied housing with no rental housing was a goal of everyone involved. Also, the mission statement of Case A was to create sustainable urban neighborhoods. However, sustainability is not one-sided; an entire neighborhood of Section 8 housing will not suffice, so diverse densities and housing types were important in the project. The CDC agreed, because one of their biggest concerns throughout the process was not only addressing the physical environment but the social implications as well.

The three paths did not cross in Shared Visions, because each organization pursued the project for slightly different reasons. Generally, a project could be completed to promote the professional field of design, for the residents in an area, or for the economic well-being of the city. In Case A all three organizations had similar goals, yet their motivation for accomplishing those goals differed. The CDC kept the needs and the desires of the residents in mind throughout the process, and the neighborhood association had a responsibility to the residents of the area to improve their living conditions. Owner-occupied housing was one way to accomplish this. The design team's mission was to complete economic re-developments in urban cores therefore improving the market value and the city's economic well-being. The design team also felt it was important to promote the design profession by showcasing types of collaboration such as this one. The city planner differed in his motives and had strong feelings about new development relative to existing urban development. He fought hard for a design that would portray the original architectural character of the

neighborhood and not change the feeling of the older, surrounding buildings. It was for these reasons that Case A received a ranking of two on Shared Visions.

The third organizational condition was Formalization, which primarily addressed contracts. In Case A, a formal American Institute of Architects (AIA) contract was drawn up by the design team and agreed upon by all involved. However, they did not receive a three on formalization tools because it was the first project of its kind created by the design team and the CDC, and, thus, there were many unanswered questions at the beginning of the project. Each of the project managers stated in his or her interview that there were times during the process, when nobody knew what they were doing or whether the project would continue. At one point, the CDC temporarily walked away from the table after not being able to work out its concerns. Fortunately, when this happened the design team re-organized and was able to convince the CDC to return to the project. This lack of an organized contract was another way in which the process of development in Case A was different from most typical architecture projects.

The second element under Formalization was the Information Exchange. In this section, Case A received a full ranking of three. The entire process was done through databases, phone calls, and email. Plans were sent via email so that the CDC knew what every plan looked like before the meetings began. Any issues were addressed immediately, allowing the organizations to avoid unnecessary difficulties.

The final organizational condition included was Internalization. In Internalization, the elements were directly related to the inter-personal relationships of the parties involved. On both indicators, Mutual Acquaintanceship and Trust, Case

A received threes. Both organizations wanted to improve the quality of life, and they wanted to work together to do this. The project architect and the planner agreed that everyone had a strong sense of trust that made making difficult decisions easier. At one point during the interview process, both project managers, from the design team and the CDC, referred to themselves as “old hippies who just wanted to help out.” I laughed out loud at this proclamation, but it made sense, because they had similar underlying goals, the project managers became friends through the process. Today the project managers consider each other a friend and gardening buddy. These two “old hippies” not only established a good relationship that will last long past the finish of construction, but they also managed to develop a successful living environment for new residents who come to the Kansas City urban core.

RESULTS

Case A had a high level of collaboration between the CDC and the architect. At the time of publication of this study, the development was about 60% completed, and sales were profitable. The local residents were pleased with the development and happy to display their new neighborhood. Although there was some anxiety about whether the remaining plans will be built, the residents remain optimistic. The designers had hope that the economy improves and they can continue, but were waiting to start any new construction. Other collaborations in and around the Kansas City area that resemble the organizational collaboration of this case have begun, and all of the key players were glad they committed approximately 15 years of their lives to the cause.

CHAPTER 5

INTRODUCTION TO THE CASE

The second case focused on two “old friends,” which was the way each participant referred to the other. Case B was a middle-sized housing development with 40 rental units. All of the housing units in this project were of moderate housing density, and the entire project was zoned for multi-family apartments. Case B took approximately two years to plan and build, and it was successfully finished in May 2007. Today the entire apartment complex is rented out. Case B was an affordable-unit, new-construction project for families and an excellent addition to Kansas City’s affordable housing stock. This project provided families in the area with safe housing at an affordable monthly rent. There were 20 two-bedroom units built and 20 three-bedroom units built, allowing for flexibility in family size. The area in which the project was located is one of Kansas City’s lowest income residential areas. There had been some work done in previous years, but, much work was still needed. Many of the properties in the neighborhood were in disrepair, and few were owner-occupied.

The non-profit CDC that commissioned this project had already completed a similar, affordable senior-housing project directly across the street. The CDC had worked with the same architect on that previous project and was very impressed with the results. That project was full, but there was still a demand for affordable housing in the area, so the CDC again contemplated an appropriate project for the neighborhood. Once the CDC decided to do medium-density affordable housing,

there were many obstacles that needed to be addressed before any planning or design could take place. The CDC had to purchase 16 parcels of land for the future site of the project, plus four more parcels for the boundary areas of the site. In order to do this, offers were made on all of the remaining vacant homes on the site. Many of the homes were not owner-occupied and tracking down the owners was difficult. There were fewer than 10 residents that were displaced during this process and all of the residents were compensated the appropriate amounts. Soils tests were also completed. Due to the urban soil and a past history of dumping, there was some difficulty finding good soil. Finally, once the site had been determined, the CDC had to establish contracts with the lenders who would be involved. Since this project was to be low-income, there were restrictions and tax regulations that needed to be followed before the project could move forward.

The CDC for Case B was established in 1991 and was at the time of publication the largest Community Development Corporation in the state of Missouri, with headquarters in Kansas City. As a nationally-recognized catalyst for comprehensive development projects, civic investment, and building social networks, the CDC had strong goals and was committed to the area and to improving the living conditions for its residents. Its mission was to “improve the general well-being of communities by developing health and family services, increasing educational and employment opportunities, and building quality, affordable housing.” Planner B believed that the CDC’s values were about building high-quality housing at affordable rates without sacrificing safety. Planner B also said “the greatest joy in the

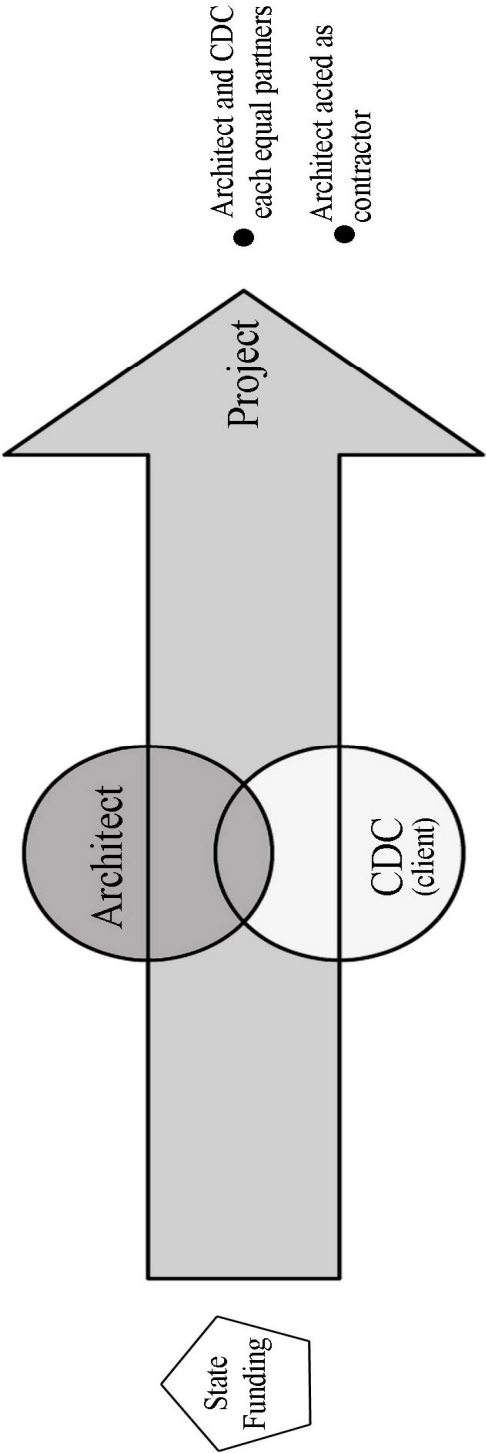
business was finishing the project and seeing the residents' faces when they realize this would be their home.”

The design team hired for the project was the same architect and firm that had designed the CDC's senior housing project a few years earlier. In fact, on every project the CDC has ever done in the city, the group has worked with the same architects. Both the CDC and architecture firm attribute their successful history to a high level of collaboration, and by the time they worked on Case B, both parties knew what to expect and how to communicate effectively. The architect on the project considered himself and his firm an urban-core design firm, and he enjoyed working on inner-city projects. Most of the work done by the firm was affiliated with the Missouri Housing Development Commission (MHDC) or with Housing and Urban Development (HUD). Architect B believed that it was nice to be able to help the community through his work. The shared determination and goals of these organizations were the building blocks to a successful partnership. Both organizations were aware of the soil issues and the land acquisitions, but the bottom line was to provide safe, quality housing at an affordable rate.

In this project, like in Case A, Case B had an organizational structure that was similar to the partnership/collaboration model referenced in the AIA handbook (Demkin 2001) (Figure 7). However, unlike Case A, Case B had state funding that affected the planning process. The proposal that was developed by the CDC at the beginning of the project discussed the requirements for funding, and when the time came the CDC purchased the land and assumed financial responsibility. Case B was also different from Case A in that there was no public input on this project. All of the

Figure 7: Project roles for Case B compared to the AIA Handbook 13th Edition

CASE B
Project Roles for participants



Similar to the partnership/collaboration model
included in the AIA handbook

decisions made were by the CDC and the architect together. The architect also served as contractor on Case B so lines of communication were open.

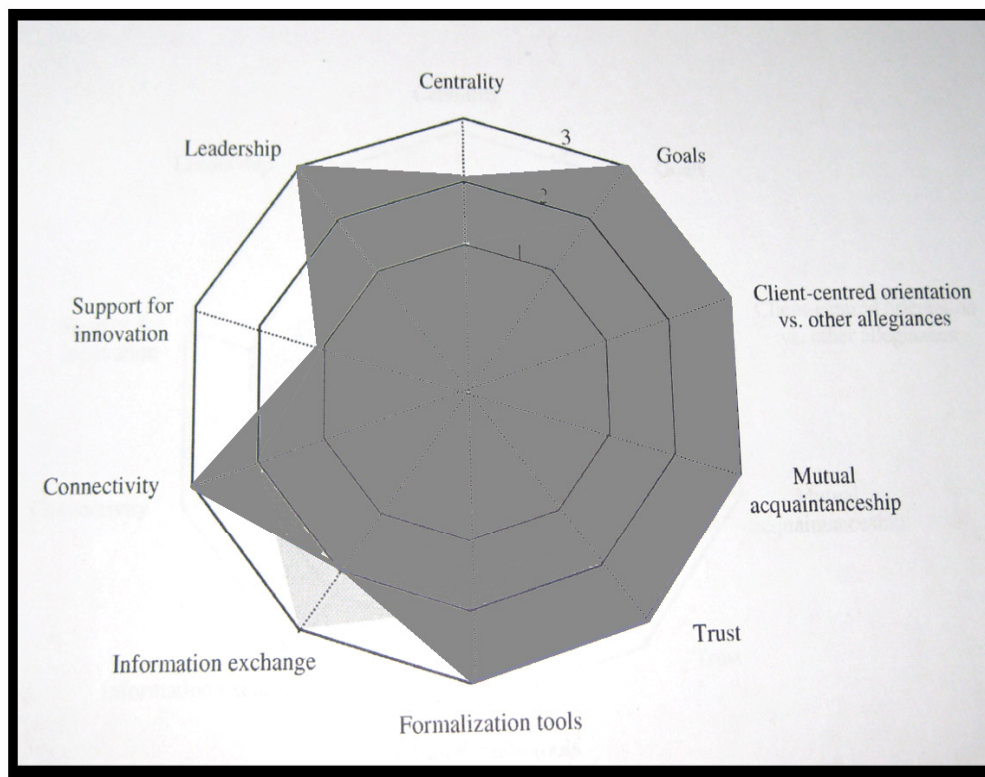
The plan and design for the project went smoothly. The submitted plan consisted of two buildings, each with 20 units. A large playground was placed in between the two buildings and provided a safe area for children. The planner stated in her interview that she was pleased with the open communication throughout the entire process. This was Planner B's first development as a project manager, and although she had been with the company for 11 years, she mentioned that the architects would have been able to make all of the decisions without her because she had less expertise in the area. However, she said that whenever she was unclear of something, the architect helped her understand so that she could participate in all of the conversations. She believed she learned as she went, which resulted in an equal partnership.

DATA ANALYSIS

For this case, I spoke with the planner from the CDC and the project architect from the design team. Each participant had positive comments about the project and readily shared the plans. When I applied D'Armour's model to their interview answers, I was impressed with the results. The following graph shows the Case B results, which are explained below (Figure 8).

The first organizational condition studied was Governance, which is where Case B scored the lowest ratings. The first of the four elements, Centrality, received a two. The main reason for this lower rating was because despite past projects

Figure 8: Findings for Case B plotted on D'Amour's graph.



CASE B

between the CDC and the architect, this was the first leadership role for Planner B. She had worked with the architects before but never in a leadership role; therefore, she had a greater learning curve than the others. Yet, she felt the architects did a wonderful job working with her and helping her understand the management process.

The second element for Governance was Leadership, and Case B received the full three. The role of the project managers was clear to both organizations, and both the planner and the project architect knew that it was a true partnership rather than an individual leadership position. During the interviews, this smooth leadership role was credited to the fact that the organizations had worked together many times and considered themselves to be old friends.

Connectivity was the third element in Governance, and Case B again received a three. During the planning process and construction, the locations for meetings often changed along with the frequency of meetings and who attended. During the early phases, many of the meetings were held at the CDC and typically included the lenders, the contractors, the financial advisors, some of the board members, and the architects. Once the plans were approved and the construction began, the meetings often took place at the site with fewer participants. No site was a dominant location.

The final element related to Governance was Support for Innovation, and this was where Case B scored the lowest of all ten indicators. Support for Innovation is an important element: it not only promotes new technology, but it also makes the process easier and run more smoothly. Like Case A, this case did not exhibit much innovation. However, unlike Case A, Case B did not include much public input. Public input and participation are both ways in which projects can be collaborative;

inclusion of this would have increased Case B's innovation. Most of the decisions made for this development were made by professionals, and public opinion was not heavily considered. Case A received a two because although they did have public input, they had little other innovation. Case B received a one because they had neither public input nor other innovation. Had the CDC conducted more public surveys or included some resident's perspective on the design plan, its score may have been higher in this category.

The second organizational condition was Shared Goals and Visions, where Case B scored perfectly on both elements. The first, Goals, was simple to rank. Both participants had the goal of providing safe, quality housing at an affordable rate. The CDC wanted not only to improve living conditions, but it also wanted the residents to be proud of the buildings in which they lived. The architects also wanted to improve living conditions, but their primary goal was the actual construction of the house. Together, with the current residents in mind, safe, urban housing was the bottom line.

On the second element within Shared Goals and Visions, Client-Centered vs. Other Allegiances, Case B again scored a perfect three. The design team in this case had an allegiance to the people of the city's urban core. They have consistently sought out these projects in an attempt to improve their community. The mentors of the design team were experts in that area of study, and they always attempted to design for residents who need housing the most. Additionally, the CDC has an allegiance to the people of Kansas City, not just to improve their physical environment but to improve their social environment as well. This similarity does not typically happen. Often times, as in Case A, the two agencies have allegiances to two

separate entities. For instance, some may want to promote their own work, while others may want to work for a specific group of people. However, in Case B both agencies wanted to help the low-income, urban residents in Kansas City.

The third organizational condition specified by D'Amour was Formalization, and again, there was a formal AIA contract involved in this case. Case B scored a three on the element Formalization Tools because of the size and the past work of the CDC. Due to the large size of the corporation and the powerful board of directors, contracts were formally drawn up on all cases prior to breaking ground, and Planner B was not involved in the decision-making process until the contracts were signed. Throughout the process, the board of directors and the president of the CDC were working together. This was different from other housing developments and smaller CDCs where the project managers handle the entire project. Case B had a very structured process, and the responsibilities were clear from beginning to end.

On the second element of Formalization, Information Exchange, Case B received a two, because they used mainly phone calls and email for communication. One positive aspect was that Planner B reviewed the plans prior to each meeting, and if there was an addendum, she was aware of it immediately. However, they did not use an information database to keep records, which contributed to the rating of two.

The final organizational condition included in D'Amour's model on collaboration was Internalization, and, like in Case A, this was my favorite part of both interviews because I learned about the actual relationships that developed and the arguments that occurred. As with every project, especially collaborative ones, there are disagreements, perhaps about lay-outs, furniture, or even paint colors. Case

B was no exception; yet, listening to the planner and the project architect talk about these instances made me realize that although they disagreed, they were able to reach a consensus on most issues.

One story comes to mind about the exterior paint colors. I first spoke with the CDC project manager who loved the project, and at the end of our meeting she told me to ask the architect if he had changed his opinion on the paint colors. She said this laughingly, so I knew there was some joke related to it. When I got to the architect's office, I asked him about the paint. He laughed and said, "Did she tell you to say that?" Apparently, the project manager had wanted a sky blue for the apartments' exterior. However, this was not the architect's first pick for paint color, but after some discussion, he agreed to the color. To match the sky blue, the architect chose a burnt orange for an accent. Today the building stands in downtown Kansas City with a sky blue and orange exterior. People comment on the color constantly, nonetheless, it is a nice, eye-catching building, and the people of the area love the compromise reached by the project managers.

The first element included in Internalization was Mutual Acquaintanceship, which was easily determined because the two organizations considered themselves good partners and the project managers, good friends. For every development the CDC did in the area, it hired the same architect. Both project managers felt that they could fully express their opinions in a professional manner. They not only knew a lot about one another, they trusted one another as well; thus it received a three. As stated earlier, Planner B felt that she could have been taken for advantage of during certain times during the project and if the CDC had worked with a different design team, the

results may have been different. Though she had been with the CDC for 11 years and had worked with the architects before, this was Planner B's first leadership role, and there were areas that she found difficult. However, at no point during the process did she feel the design team tried to take advantage of her lack of expertise. They worked in an equal partnership throughout the entire process the way it had been clearly stated in the contract.

RESULTS

After having analyzed all 10 elements, Case B's strengths and weaknesses were clear. Case B had a lack of innovation, and innovation is extremely important in the building environment. There could have been improvement in that area as well as in another Governance element, Centrality. It was obvious though, that the strength in this particular project came from Internalization. Both participants truly believed that it was the interpersonal relationship between members of the two organizations that made this collaboration successful. Had the history not been there, the results may have been different.

At the time of writing, the occupancy level in the apartment complex was 100%. Furthermore, there was a lengthy waiting list for occupancy. One result of the development was that the surrounding properties have begun to be rehabilitated. This development has proven to other low-income residents in the neighborhood that they can also have safe, quality living environments. Owners of the homes adjacent to the property have improved their units, and the residents in the new complex have appeared to take more pride in the building and it remains in good condition.

CHAPTER 6

INTRODUCTION TO THE CASE

The final case in my study on collaboration was also the smallest in scale. With only five individual housing units, Case C was very different from both Case A and Case B. All five units were single-family units located on the same street in Kansas City. In a convenient location just minutes from downtown Kansas City and Crown Center, these five single-family units were built for a special group of low-income residents.

Each of the five single-family units was done as new construction with an attached, front-loaded garage, three bedrooms, and at least two baths. The design team and the CDC working on the project realized that three bedrooms and two bathrooms would be better for marketability. Additionally, each unit included a front porch for increased neighborhood interaction, and each home was Energy Star rated.

The funding for the project came from a New Market Tax Credit that included 25% state funding. The funding included down payment assistance from the Kansas City Dream Program, and the houses were only eligible for sale to a certain low-income population in the city. Therefore, there was a narrow group of buyers who could qualify to own these homes. Regardless, both the design team and the CDC wanted to develop the highest quality home for the best price.

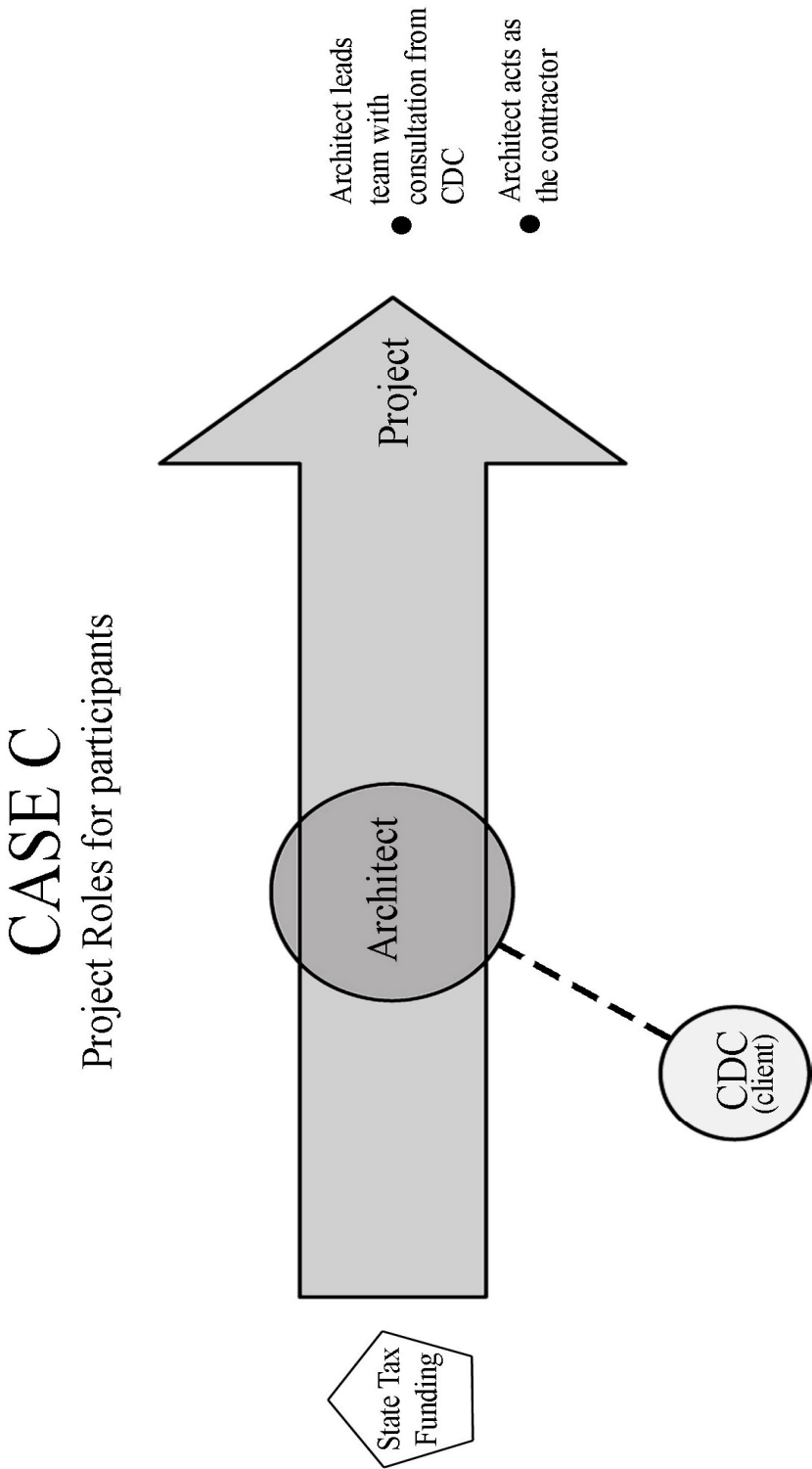
The area for this project was chosen based on the needed urban revitalization. The CDC realized that vacant lots need to be revitalized, and the selected street provided the organization with five vacant lots all on the same block, enabling an

architect to design five different homes with similar amenities. Additionally, the CDC already owned these vacant lots, so land acquisition was simple. The land simply needed to be prepared for construction, and sales were not required to begin the project.

The CDC in charge of this case was a not-for-profit Community Development Corporation concerned with urban neighborhood re-development, educational programs, and community services. Figure 9 shows the organizational structure of Case C in reference to the diagrams given previously. Unlike Cases A and B, Case C was similar to the team builder model from the AIA handbook (Demkin 2001). The planner hired the architect to work collaboratively; however, the architect also had more control over the final design and implementation than those in the other two cases. In the AIA handbook, the model included the architect working with a contractor, however in Case C, the architect not only did the design but worked as the contractor as well. Funding was more difficult in Case C than either of the two previous cases; Case C received funding from a state tax incentive program that greatly narrowed the window of buyers.

This CDC worked in a specific neighborhood within Kansas City and has been in existence for over 25 years. One of the biggest advantages of this CDC was that they used a block-by-block strategy to ensure the results they wanted in the neighborhood. They were not only concerned with revitalizing urban neighborhoods they were also concerned with revitalizing the neighborhoods in a sustainable manner and in a way that could be promoted throughout the rest of Kansas City's urban core.

Figure 9: Project roles for Case C compared to the AIA Handbook 13th Edition



Similar to the team builder model included in the AIA handbook

The planner from the CDC who worked on Case C was an urban planner committed to housing and the built environment. He has a master's degree from the University of Missouri, Kansas City in Urban Planning, and he joined the CDC in June 2006 after having worked one year with another CDC builder in the area. At the beginning of the project, the CDC had another planner in charge, but the current planner took over approximately half-way through the process and continued to work with the neighborhood.

The design team that took on this case was a small, two-man practice in Kansas City. Despite having only two employees and doing all of the work themselves, the team has been designing homes for CDCs for over 20 years and has created a niche for themselves. The project architect on the case was the son of an architect and had focused on urban housing for many years. The CDC with which he worked prior to this one worked only on inner-city residential homes, so he considered himself an expert on urban home design. He stated that he hopes with every urban home he designs, the designs get better and more efficient. Architect C said he tries to design homes that do not look exactly the same, yet still fit with the existing environment. This personal goal turned out to be a challenge in this specific case. Since the surrounding units on the street were built in the 1920s, the older and existing units did not have attached front-loaded garages. However, given the circumstances of the real estate market, both the architect and the planner felt this amenity must be included. The team worked with the CDC to reach a compromise about how to solve this problem. In the end, they decided it was important to build these units of good quality at a good rate.

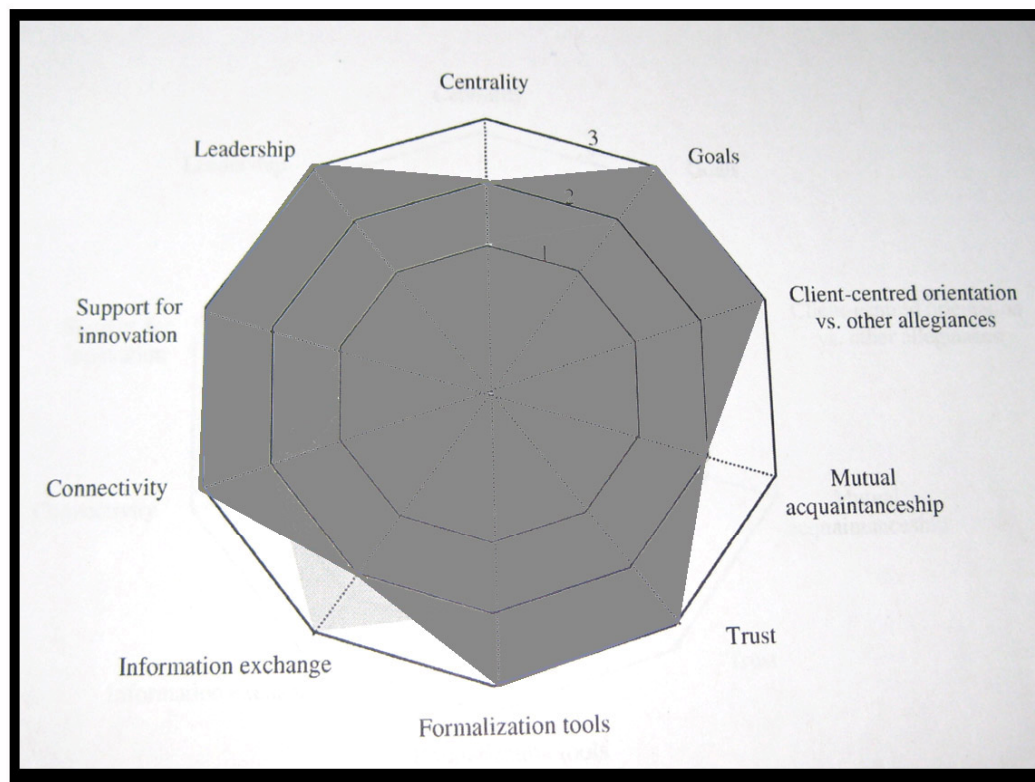
A second issue that the CDC wanted to address was sustainability. It was very important to the CDC to build sustainable environments, especially in neighborhoods that were not originally designed that way. Hence, the design team needed to create floor plans and material palettes that allowed for sustainable living. One of the ways they accomplished this was designing each of the five units to be Energy Star rated. In order to do this, they received advice from an energy consultant who guided them in their plans.

The end result was a design for five, separate, and different single-family units, all of which included attached, front-loaded garages and were Energy Star rated. Also, each unit was built for less than \$100 per square foot, which meant design quality units at an affordable rate. For my study, I interviewed the planner from the CDC and the project architect from the design team. Each participant was happy with the design but had his own opinions on what could have been changed to make this project more successful.

DATA ANALYSIS

As done in the previous two cases, I analyzed each of the four organizational conditions from D'Amour beginning with Governance. The following graph shows the results of the interviews (Figure 10). In the area of Governance, I analyzed how the organizations were managed and how the leaders supervised the project. The first element, Centrality, received a two out of three, mainly because the project managers from the CDC switched half-way through the project. Architect C stated in his

Figure 10: Findings for Case C plotted on D'Amour's graph.



CASE C

interview that it was a smooth transition but did admit to some lag time while the new planner was getting acclimated. The planner who had been with the CDC left for another company, but luckily Planner C was already in the corporation and knew how the organization was run. The second element in Governance was Leadership; here Case C received a full three. Both organizations and both participants felt the leadership was clear, despite the manager replacement. More importantly, the participants pointed out that they never went to the site or made decisions on their own. The architect always had someone from the CDC with him whenever he was on site and vice versa. This method avoided unnecessary disputes by maintaining open lines of communication.

The third element in Governance was Support for Innovation. These results surprised me the most. This was the final case I studied, and I had already learned that my first two cases had scored low on Support for Innovation. Thus, I was surprised when I discovered that the homes in Case C were Energy Star rated. Even though it was the smallest scale project with the smallest-scale collaboration, it received the highest rating for Support for Innovation. I was pleased with this result. As an architect, I believe it is important to be energy efficient, particularly when building and designing sustainable homes. Both the architect and the CDC felt strongly enough about sustainable design to include it in their plans, which was difficult considering that they had to build the homes at an affordable rate in order to meet the requirements for the funding. After analyzing all three cases, one of the most important realizations of the entire study was that even with a small project one can make smart building choices that will not harm the environment.

The final and fourth element in Governance was Connectivity: how, where, and when the decisions are made. Case C received a full three on this element as well. As stated earlier, neither the project architect nor the planner ever went to the site alone or made decisions alone. Meetings took place in the architect's office during the beginning stages and on site during the construction, during which they had a moving conversation as they walked the construction site.

The second organizational condition was Shared Goals and Visions, and Case C received full threes on both elements. In both cases, the participants were concerned with providing high quality housing at an affordable rate. Rather than simply providing affordable housing, it was important to them to provide quality housing and housing in which the residents could feel safe and of which they could be proud. Along with quality housing, both organizations were also interested in focusing on urban neighborhoods or neighborhoods where revitalization needs were evident.

The second element, Allegiances, also received a three. The project architect owned a very small firm and did not receive a lot of recognition in the Kansas City Metro area, yet he was committed to designing urban housing. He felt there was a great need for housing for low-income residents and in dilapidating urban neighborhoods. He also felt that working with CDCs was a way to improve housing conditions throughout the city. Similarly, the CDC was interested in improving the conditions for residents in the city. Despite working in one particular neighborhood, it addressed urban housing issues just like the design team, and it felt strongly about the way the urban environment should be improved.

The third organizational condition was Formalization, which dealt with the formal contracts in the collaboration. In this element, the project's collaboration received a three. There was a formal AIA contract drawn up in both organizations. Architect C had worked with CDCs in the past on urban housing and was familiar with the collaboration process. Each organization completely understood its responsibilities, and neither had clarification issues. Each organization was also aware that this project was a full partnership and neither one was completely in charge of the decision-making responsibility.

The second element associated with Formalization was Information Exchange and Case C received another two due to the project manager switch halfway through the project. As a result of the lag time associated with taking on a new planner, there were moments when information was not given or responded to directly or clearly. Email and databases were used to keep plans and meeting schedules, but there were times when the lack of familiarity between the architect and the new planner contributed to missed information exchanges.

The final organizational condition I analyzed was Internalization, and as in the two previous cases, this was where I became familiar with the inner-workings of the collaboration. This was the condition that answered all of my questions about how smoothly, if at all, the process ran. I learned about the personal relationships between the participants as well as the relationship between the CDC and the design team. The first element within this organizational condition was Mutual Acquaintanceship. The architect said that he was familiar with the initial planner; however, he mentioned that he had limited contact with the replacement planner and, therefore, the level of

comfort decreased during the second half of the project. For this reason, Case C received a two as opposed to a three.

In the second element of Internalization, Trust, Case C received the full three points. Regardless of the planner switch and the architect's decreased comfort level, both participants felt they could completely trust the other organization. This may have been due to the fact that the two organizations worked well together, a fact that gave confidence to both the architect who accepted the new planner and the planner who gained confidence in himself and trusted the architect. In the end, the project planner and the project architect fully trusted the other's area of expertise, and together they were able to design and construct five quality, affordable single family units. Trust in the collaborating half was what made this project successful. Had one of the participants not been able to completely trust the other party, this collaboration may not have been completed.

RESULTS

At the time of writing, the five units have been finished and have been rated as Energy Star units; however, none of the five units has sold. Due to the project funding, and the type of eligible buyer, the window for buyers was very slim. A potential buyer must have a certain yearly income yet cannot make too much. In addition, the poor state of the economy when the homes went on sale made it difficult to find eligible buyers to purchase these homes. Both the architect and the planner attributed this lack of sale to "bad timing." The architect believed that had the project been constructed and completed during better economic times, the units would have

sold and been occupied immediately, but unfortunately they were not. The planner believed that the lack of sales was not the fault of either organization but was simply due to the small group of qualified buyers. He continued to work on getting all five units sold.

Both the planner and the project architect believed that if the economy turned around in the near future, the units would sell. They were pleased with the level of collaboration and would like to participate in another partnership like this one. For now, though, they were happy with what they have done for the area and were waiting for this “bad timing to turn into better timing.”

CHAPTER 7

After studying all three projects in the Kansas City metro area, I realized that they were each very distinct. Each project was of different scale, with different participants and different collaborative techniques. However, I also saw that the projects shared underlying goals. Each of the organizations was committed to collaboration and sharing responsibility with another organization. Also, all of the architects and planners were interested in building better housing in the urban community. Whether that housing was market rate or below, the participants believed in providing quality housing.

COMPARISON OF CASES

First, each case had different project roles and collaboration structures, as described in the previous chapters. According to the AIA Professional Practice Handbook, most projects fall into one of three project role types, and this was true for my cases.

From the analysis, Case A had a high level collaboration structure, resembling that of the partnership/collaboration model in the AIA handbook. The case had an equal partnership between the architect and CDC as well as consultations with the city planner. Case A also included extensive citizen participation that encouraged the consideration of many opinions. Case B also had a high level of collaboration structure; although, it differed from Case A, in that Case B's structure resembled the

same partnership/collaboration model but did not include citizen participation. All of the decisions made for Case B were made by the two participating organizations.

Finally, Case C had the more traditional collaborative structure. The structure resembled the team builder model from the AIA handbook, yet still promoted collaboration. The CDC worked in a partnership with the architect, but the architect had slightly more control over the final designs than in the previous two cases. This organization was similar to how other typical architecture projects work. Though unlike other typical architectural projects, Case C's architect was also the contractor and the project included innovative practices, such as the Energy Star ratings that were incorporated. Another difference between these three cases and the typical models listed in the AIA handbook was that all three cases had a non-profit group working on the project. Therefore, the underlying goals were similar to one another.

As for the results of the research and interview questions, I found both similarities and differences when I reviewed each of the three graphs to compare cases. Case A had a full concentric graph and did not receive a one on any element. Therefore, it was visually clear that this was a strong partnership and collaboration. The three elements on which it received twos were in three different areas of research, and all three areas scored approximately the same. There was not one organizational condition that was stronger than the other three, except for Internalization. Since each area only scored lower in one element, I believe future projects can learn a lot from Case A, because they had high collaboration scores and each participant spoke positively about the partnership. It was a strong partnership for both the planner and the architect, and those involved were pleased with the end

result. The units are selling, and the development has created a larger interest in the real estate community. This case also included the most public input, and the design entity that developed it was the least conventional of all three cases. Case A has received some positive recognition throughout the Kansas City area, and other developers now look at this project for guidance. Since it was created through this type of collaboration - a non-profit design team as well as a non-profit CDC - it has shown many other agencies that collaboration can be accomplished and has made a statement in the built environment.

Next, Case B's graph showed more movement than Case A. At an initial glance, it appeared to be a weaker collaboration due to the appearance of the lowest score of one. However, after further consideration, one can see that Case B only received a one on a single element - Support for Innovation. Yet since this was only one element of ten, this project had other positive results. Case B scored threes in seven of the other nine elements, and the project displayed excellence in many of these categories.

Each participant of Case B was pleased with the process and results, which in turn positively affected the community. For instance, the surrounding properties have begun to be revitalized, and neighbors have taken greater responsibility for their units. All 40 of the units have been inhabited since the complex opening, and it does not look like this will change in the near future. The residents are happy to call this complex home.

Finally, Case C also showed impressive results. Again, the immediate response of this project was similar to the first case, which was that another strong

collaboration took place. There were only three elements that did not receive the full score of three, and again, they were in different organizational conditions.

Interestingly, Case C was the only project that did not score perfectly in the condition of Internalization. The architect was pleased with this project as was the planner; however, the units were not sold, a fact that hindered prosperity of the development.

By studying all three graphs I was able to make some conclusions. First, I believe that Internalization was the most important organizational condition because it dealt directly with the participants. This considered how well the professionals worked with one another and how they felt about one another. This was an important piece in collaboration - having respectful partnerships. In Case C, the planner was replaced half-way through the project making things more difficult; however, the partnership between the two organizations did not waver.

On the element Support for Innovation, all three case studies received a different score. Case B received a one because it did not exhibit any form of innovation in its project. Case A received a two because despite not showing a lot of innovation, it did include public opinion and residents' opinions in much of the planning discussions. This in turn led to a collaborative and innovative process; especially in this case, where the collaborative process was made by two non-profit groups. Case C received the highest score of three because it designed and built units to be Energy Star rated. Although it too did not include much public opinion, the Energy Star rating highlights the dedication to the built environment. If the elements had been designed specifically for collaboration in the built environment, and Support for Innovation had included two parts the results may have been different. Though

Case C was Energy Star rated and received a high score, it was the most conventional type of collaboration. Case A, on the other hand, was not considered innovative in relation to sustainability and the project; however, it was considered to be the most innovative approach to the organization and project structure.

Finally, each graph showed a weak point. Case A's was Client-centered vs. Other Allegiances, Case B's was Support for Innovation, Case C's was Centrality. For each manager on the project, they had different areas in which they could improve, so no case scored perfectly.

Although there were differences, there were also similarities among the three cases. In each project, seven of the ten elements received threes. Each case had only three elements where they did not score perfectly; however, those elements varied between projects, with the lowest scored element as Support for Innovation. Finally, based on my analysis of D'Amour's model, I concluded that all three cases were collaborations.

The strongest project holistically was Case A. It received perfect scores on seven of the ten elements and did not receive any ones; even though Case C scored the same, Case A sold the units at a reasonable rate and cost while Case C had not. Therefore, I believed Case A to be the strongest case and Case B to be the weakest case, slightly weaker than Case C, because Case B was the only project to receive a one on any element. In the end, the results were close between all three cases. Each case had its own strengths and weaknesses, yet there were small distinctions that made the difference. I considered each project encouraging and believed that each collaboration method can be used to create guidelines for future projects.

ANALYSIS OF MODEL

The next section of this chapter was dedicated to an analysis of D'Amour's model on organizational conditions that facilitate collaboration when applied to the interaction of the professions of planners and architects. Overall her model was very complete and provided a basis to evaluate collaborative techniques that could be applied in the fields of design. I found that there were two pieces of D'Amour's model that were extremely important.

First, I felt that her most effective organizational condition was Internalization. As I stated earlier, Internalization attempted to describe how participants worked with one another and included two elements, Mutual Acquaintanceship and Trust. These were two important elements for several reasons. Firstly, they were two elements that were very difficult to quantify and identify. Secondly, the elements were reflective of the organization and its inter-professional relationships, of how the participants feel in their jobs and whether they were happy and comfortable, and of how the two organizations the design team and CDC worked with one another. The basis of many collaboration models is how well the participants work with one another, and, thus, logically it made sense that D'Amour devoted an organizational condition to it.

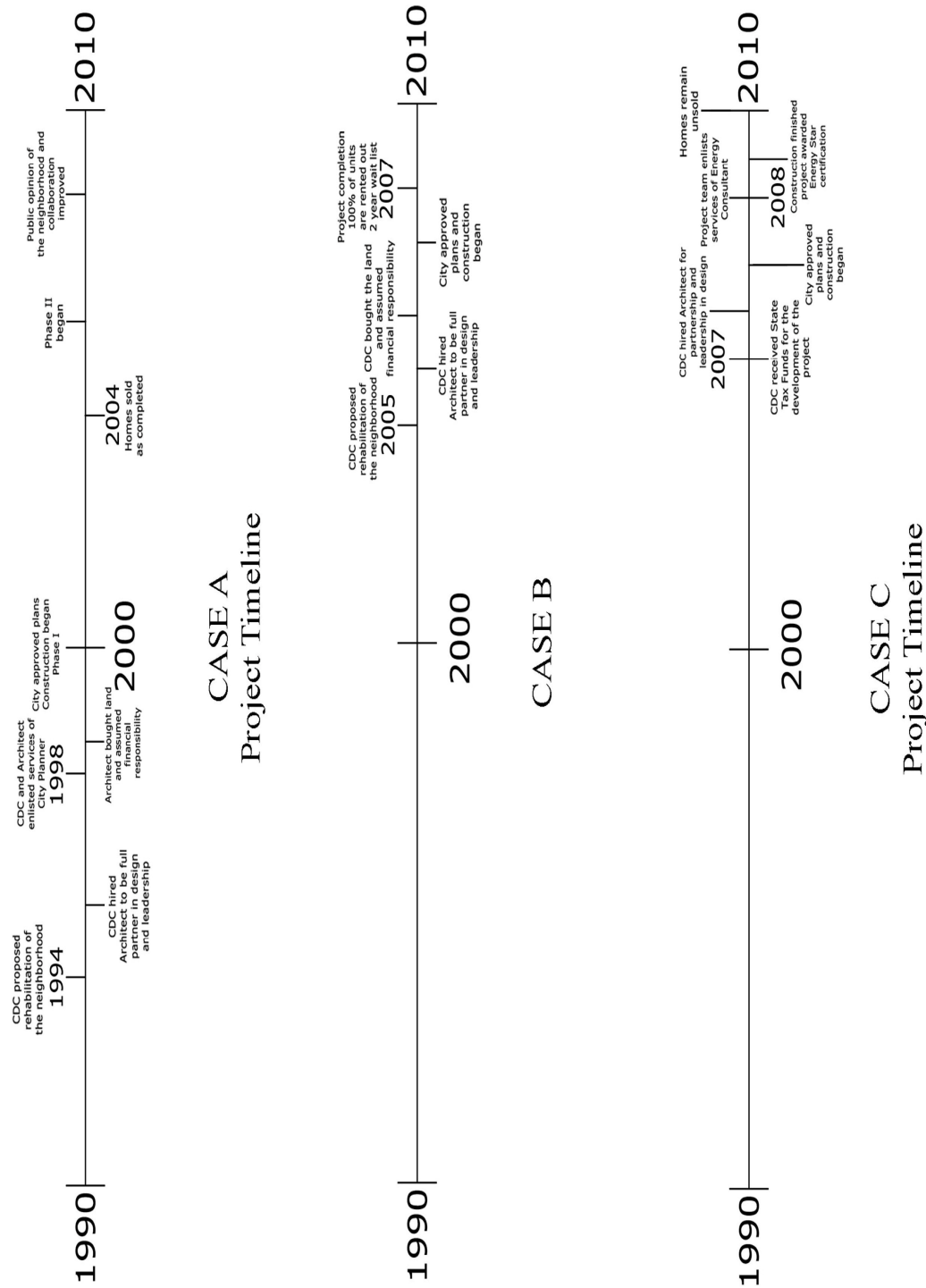
The second piece of D'Amour's model that I found important was the element, Support for Innovation. Particularly in the built environment, innovation is a basis to move forward. With today's world problems, innovation in the built environment is a necessity. This can be difficult to judge, however, and as mentioned earlier, and had I continued this research, I would have separated Support for

Innovation into two parts in order to fully encompass the research. This paper studied Support for Innovation in relation to the project and sustainability, but it can also be measured in relation to the organization and its approach to the project. These can be considered two different elements, each contributing to a different type of collaboration.

There was a factor that D'Amour did not include in her model that would have had an effect on the results and that I feel should have been included. This element was the timeline. For example, in the health care industry the timeline may or may not be as important when evaluating collaboration; however, when you apply this model to the field of design, the timeline plays an imperative role. In studying all three projects, I discovered three very different timelines (Figure 11). Had I assigned measurements to these results and included them on the graphs, I would have seen different results. Without this information analyzed, I can not conclude that a faster project was better or vice versa, but this information certainly may have affected the project's collaboration.

For instance, Case A, from start to finish, took approximately 14 years. This was from the time the project manager began to dream about the possibility of urban housing in that neighborhood, to the present time when phases of the project have been completed and there are residents living there. This project was long and difficult. There were constantly permits and infrastructure issues that needed to be addressed, but throughout the entire process, the CDC and the design team never gave up hope on making their plan a reality. Had time been an indicator on D'Amour's

Figure 11: Timelines of the three cases



graph, Case A may have scored differently this in turn would have affected its overall collaboration.

On the other end of the spectrum, Case C took approximately one year to plan and develop. This could have been due to the scale of the project but may have included other factors. Neither the planner nor the architect worked on this project for more than 15 months. Encouragingly, in a short amount of time, they were able to plan the homes to be Energy Star rated. The two projects show two different timelines and Case C seems appealing because of the short timeline and the productivity level, but it is possible that Case A's relationships were stronger due to the amount of time spent on building the partnership.

RESEARCH QUESTIONS

The research questions posed at the beginning of my study were answered. The first set of questions included the following: What forms of collaboration have been used by design and planning firms? And, how have these collaborations been organized? These were both answered using D'Amour's model as a basis for research. My second set of research questions addressed whether Danielle D'Amour's model could be applied to the field of urban housing design and whether the results could provide managers with guidelines to facilitate collaboration in the workplace. I determined from my analysis that her model was applicable to collaboration in the built environment and could be used in the future to help organizations develop guidelines of collaboration for the workplace. My hypothesis for this study was that D'Amour's model of organizational conditions for

collaboration was applicable to the collaboration in the design fields specifically planning and architecture and my results suggested that this is true.

I determined that D'Amour's model provided the basic tools to evaluate what forms of collaboration have taken place. Again, according to the AIA handbook, the most typical architecture projects have the third type of project role model, the trusted advisor model; however, the projects I studied, all collaborative in nature, most resembled the other two models of the partnership/collaborative model and the team builder model.

Each organization had its own way of participating in the project. Case A organized themselves as they went along, often unaware of the next step. This may have been possible because there was a collaborative structure within the organizations that allowed for these actions. Case B included a large CDC that formally laid out the steps before the project began, and once the plan had been created, everyone involved had specific guidelines to follow. Case C had the smallest organization and dealt with issues as they arose in a case-by-case manner.

I also determined that D'Amour's model can be used to create guidelines that facilitate collaboration, including social activities in the workplace, contractual agreements, and programs related to promoting science and technology. The ten elements included were all applicable and needed to be modified only slightly. The area in which D'Amour's model could have been improved was the inclusion of a timeline. Her model showed that collaboration can be developed in many places and many organizations, ranging from healthcare to design projects.

The research raised another question that could be pursued with further study and time; I would like to understand the hierarchy that plays out in the partnerships and which entity, if any, had more power. In fact, this question could be included in the definition of centrality and how the governance of the project affected the power structure. In each of my three cases, the CDC initiated the partnership with the architect. Although the CDC began the project, it appeared the power was equal throughout the process. I would like to learn if this is typical of collaborative projects in the built environment. Additionally in another study it would be important to examine the role the profit motive plays in collaborative processes, since this issue was not included in the present study nor was it an issue in D'Amour's work but it is an important aspect of many projects in the built environment. For example, Case A was completed by two non-profit organizations working together where as Case B and Case C each had a non-profit organization working with a for-profit organization. The difference in each organization's motives may be an important factor to consider for future study.

CONCLUSION

Each of the two fields included in this study, architecture and urban planning, contributed to my conclusions. The contributions of both professions were strong. Both urban planning and architecture as professional fields have goals in improving the built environment.

As in every study, there were limitations to the research. The major limitations were related to the fact that I am student with limited time and funds. I

had a certain amount of time to conduct my interviews and to write my cases. I chose three projects that had positive media coverage. Had I chosen a project that had received negative media attention I may have been able to provide a stronger comparative analysis. However, I felt it was important to promote the collaboration between the two fields and to provide examples of work that had been successfully implemented. For these reasons, I only sought cases that resulted in positive attention.

A second limitation to my study was the number of participants I interviewed. In each case, I interviewed the project architect and the planner. In one case, I interviewed a second planner and a second project manager. Had more time been available, it may have been beneficial to meet residents now living in the developments and the residents who were involved in the charette process. This would have given me differing opinions that could have been used to form a stronger analysis. Interviewing more participants may have supplied more variance. I do believe, though, that the participants who were interviewed were those who knew the most about each project, and they were able to answer all of the questions clearly and concisely.

A second reason to continue this study would be to allow time to evaluate collaboration using a different model. D'Amour provided a very complete model, but it would be interesting to see the analysis of each case using a second method. Other models discussed by theorists may have been more applicable to the field of urban housing.

At the end of my research, there is both contentment with and curiosity for this study. My questions established at the beginning were answered, and my hypothesis was shown correct; however, I now have more questions. The three cases I chose to study were interesting in their own right and, thus, provided me with supplemental material to analyze and make conclusions.

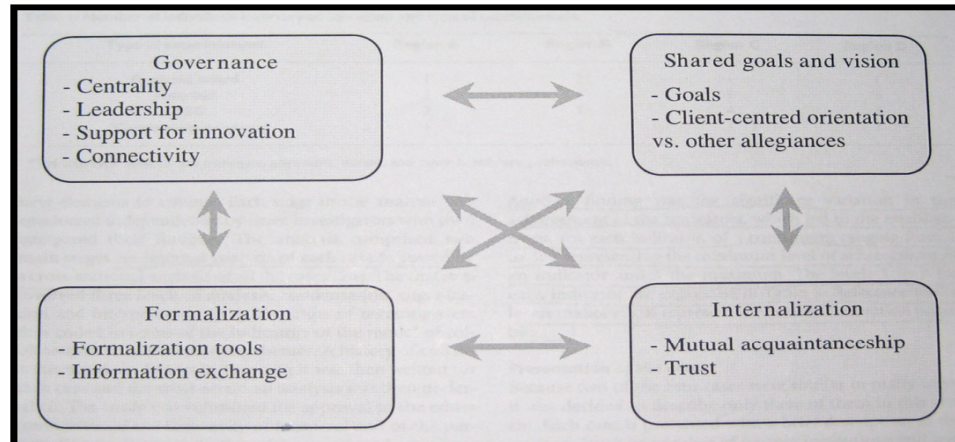
I learned that the participants felt like they have more than a job. They felt that collaboration between the fields of urban planning and architecture is a way of life and can only make the built environment stronger, and they were willing to devote their professional careers to this cause. For all participants, these projects were not their first, nor did they feel they will be their last. Collaboration was a method of design included in their everyday work. Though I have learned much about collaboration, I am curious to learn more about how collaboration began between these organizations and how this collaboration can be expanded into other related disciplines.

Future collaborations in the built environment must take place between more than just planners and architects. It must be expanded to include engineers, developers, and consultants. Society is moving towards inter-disciplinary fields that depend on many facets in order to continue success. One way our profession can improve our current living conditions is to work with one another and depend on experts in other fields for guidance when our field lacks the necessary knowledge. This is imperative in order to contribute to sustainable building in the future, and sustainably is the only way we can afford to build.

APPENDIX A: INTERVIEW QUESTIONS

1. What is the name of the project you worked on?
2. What was your job title on the project?
3. Please explain your professional values about design with respect to this project.
4. Please explain what you understand about your collaborators values?
5. PROMPT: Which goals and values did you share with your collaborators?
6. Were you aware of the projects' goals upfront? Or was there a process that made you familiar with the goals?
7. Did you know your collaborators before you began this project? Did you feel comfortable with one another?
8. How did you become familiar with your collaborators competency level?
9. Did you get to know them personally and professionally better throughout the project?
10. Please explain the governance that existed in your office, do you feel you had a strong sense of guidance? How did the governance affect the level of collaboration?
11. Were you clear of your responsibilities from the beginning of the project throughout?
12. Please explain the sense of leadership in this project, who was considered the leader?
13. PROMPT: Even though the leadership was present, do you feel your opinions were heard and considered in the decision making process?
14. Explain any new techniques of practice and innovation that were used in this project? How was it used?
15. Explain the places your collaborators used for discussion and decision making?
16. What were the inter-organizational agreements and protocols that were used for clarifying responsibilities?
17. Please explain the information infrastructure that was used for this project (REVIT)?
18. PROMPT: Do you believe this type of system was successful in contributing to the collaboration?
19. What was your overall perception of the project?
20. Who are the other collaborators that were involved in this project that you feel would be important to this research?

APPENDIX B: DANIELLE D'AMOUR'S FOUR RESEARCH AREAS



APPENDIX C: DANIELLE D'AMOUR'S TEN INDICATORS

Indicator	Description
Goals	Whether or not the underlying goals are similar between collaborators.
Client-Centered orientation vs. other allegiances	Presumes that there generally exists a complex structure of interests involving different types of allegiances. It can be allegiance to the profession, to the client, or to the organization itself.
Mutual Acquaintanceship	Refers to how well the collaborators know one another and feel comfortable with one another.
Trust	Refers to whether the collaborators trust one another.
Centrality	Refers to how the partner/president of the organization worked to keep the project planner/architect involved on decisions, during the planning process.
Leadership	Refers to how the project planners/architects worked with one another and other employees on the daily tasks.
Support for Innovation	The collaboration team dedicated to using innovative techniques in the planning, design, construction, and implementation process.
Connectivity	Professionals are inter-connected and the places of discussion and decision-making create bonds that affect the project.
Formalization Tools	Means clarifying the various professionals' responsibilities and negotiating how these responsibilities are shared.
Information Exchange	Refers to the information infrastructure that was used while planning the project and allowance for rapid and complete information and communication exchange.

APPENDIX D: IRB APPROVAL

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office of Research Assurances
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

DATE: March 19, 2009

TO: Kelsey Klein
3910 Tripp Street #124, Ames, IA 50010

CC: Tara Lynne Clapp
377 Design

FROM: Jan Canny, IRB Administrator
Office of Research Assurances

TITLE: Thesis: Bridging the Gap Between Planning and Architecture

IRB ID: 09-124 **Study Review Date:** 19 March 2009

The Institutional Review Board (IRB) Chair has reviewed this project and has declared the study exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b). The IRB determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**
- **You must carry out the research as proposed in the IRB application**, including obtaining and documenting (signed) informed consent if you have stated in your application that you will do so or if required by the IRB.
- **Any modification of this research should be submitted to the IRB on a Continuing Review and/or Modification form, prior to making any changes**, to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

Please be sure to **use the documents with the IRB approval stamp** in your research.

Please note that you must submit all research involving human participants for review by the IRB. **Only the IRB may make the determination of exemption**, even if you conduct a study in the future that is exactly like this study.

FOR IRB USE ONLY	EXEMPT Per 45 CFR 46.101(b): <u>2</u>	Minimal Risk <input checked="" type="checkbox"/>	IRB ID: <u>09-124</u>
			Review Date: <u>3/19/09</u>

IRB

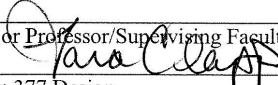
ISU EXEMPT STUDY REVIEW

MAR 02 2009

SECTION I: GENERAL INFORMATION

Principal Investigator (PI): Kelsey Klein		Phone: 563-505-8174	Fax: N/A
Degrees: M. CRP/ M. ARCH	Correspondence Address: 3910 Tripp Street #124, Ames, Iowa 50010		
Department: Community and Regional Planning		Email Address: kjklein@iastate.edu	
Center/Institute: Iowa State University		College: Iowa State University	
PI Level: <input type="checkbox"/> Faculty <input type="checkbox"/> Staff <input type="checkbox"/> Postdoctoral <input checked="" type="checkbox"/> Graduate Student <input type="checkbox"/> Undergraduate Student			

Title of Project: Thesis: Bridging the Gap Between Planning and Architecture
Project Period (Include Start and End Date): [mm/dd/yy][04/01/09] to [mm/dd/yy][08/01/09]

FOR STUDENT PROJECTS	
Name of Major Professor/Supervising Faculty: Tara Lynne Clapp	Signature of Major Professor/Supervising Faculty: 
Phone: 515-294-7759	Campus Address: 377 Design
Department: Community and Regional Planning	Email Address: tlclapp@iastate.edu
Type of Project: (check all that apply)	
<input type="checkbox"/> Research <input checked="" type="checkbox"/> Thesis <input type="checkbox"/> Dissertation <input type="checkbox"/> Class project <input type="checkbox"/> Independent Study (490, 590, Honors project) <input type="checkbox"/> Other—Please specify: _____	

KEY PERSONNEL

List all members and relevant experience of the project personnel. This information is intended to inform the committee of the training and background related to the specific procedures that each person will perform on the project.

NAME & DEGREE(S)	SPECIFIC DUTIES ON PROJECT	TRAINING & EXPERIENCE RELATED TO PROCEDURES PERFORMED, DATE OF TRAINING
✓ Kelsey Klein B.S. Interior Design	Sole researcher and author of thesis	IRB training number: 146824 12/26/08
✓ Tara Lynne Clapp	Major Professor	Human subject certification: 3/14/04

FUNDING INFORMATION

Internally funded, please provide account number: N/A
Externally funded, please provide funding source and account number: N/A
Funding is pending, please provide OSPA GoldSheet ID: N/A
Title on GoldSheet if different from above: N/A

Other: *e.g., funding will be applied for later, project not funded. N/A*

SCIENTIFIC REVIEW

☐ Yes ☒ No Has or will this project receive peer review?

If the answer is "yes," please indicate who did or will conduct the review:

If a review was conducted, please indicate the outcome of the review:

COLLECTION OR RECEIPT OF SAMPLES

Will you be: (Please check all that apply.)

☐ Yes ☒ No Receiving biological samples from outside of ISU? See examples below.

☐ Yes ☒ No Sending biological samples outside of ISU? See examples below.

Examples include: genetically modified organisms, body fluids, tissue samples, blood samples, pathogens.

If you will be receiving samples from or sending samples outside of ISU, please identify the name of the outside organization(s) and the types of samples you will be sending or receiving outside of ISU:

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ASSURANCE

- I certify that the information provided in this application is complete and accurate and consistent with any proposal(s) submitted to external funding agencies.
- I agree to provide proper surveillance of this project to ensure that the rights and welfare of the human subjects or welfare of animal subjects are protected. I will report any problems to the appropriate assurance review committee(s).
- I agree that I will not begin this project until receipt of official approval from all appropriate committee(s).
- I agree that modifications to the originally approved project will not take place without prior review and approval by the appropriate committee(s), and that all activities will be performed in accordance with all applicable federal, state, local and Iowa State University policies.

CONFLICT OF INTEREST

ISU's Conflict of Interest Policy requires that investigators and key personnel disclose any significant financial interests or relationships that may present an actual or potential conflict of interest. A conflict of interest can be defined as a set of conditions in which an investigator's or key personnel's judgment regarding a project (including human or animal subject welfare, integrity of the research) may be influenced by a secondary interest (e.g., the proposed project and/or a relationship with the sponsor). By signing this form below, you are certifying that all members of the research team, including yourself, have read and understand ISU's Conflict of Interest policy as addressed by the ISU Faculty Handbook (<http://www.provost.iastate.edu/faculty>) and have made all required disclosures.

☐ Yes ☒ No Do you or any member of your research team have an actual or potential conflict of interest?
☐ Yes ☐ No **If yes**, have the appropriate disclosure form(s) been completed?

SIGNATURES

Kelsey Klein 2/25/09
 Signature of Principal Investigator Date

Douglas H. Best 2/26/09
 Signature of Department Chair Date

FOR IRB USE ONLY:

☒ Project is exempt.
☐ Project is not exempt.

Deane K. Amert
 IRB Reviewer's Signature

19 March 2009
 Date

SECTION II. EXEMPTION CATEGORY

The following categories and sub-parts are eligible for exempt status review.

Check all applicable categories and sub-parts below. To select a category box, double-click on the check box.

PLEASE NOTE:

All procedures for all subjects in a project must be exempt in order for the project to be reviewed for exemption (i.e., all of the activities that participants will be asked to participate in must be found in one or more of the following categories).

Exemption does not apply if the targeted populations for the research will involve individuals who are legally incompetent, significantly mentally ill or impaired, or those who are vulnerable to extraordinary institutional coercion, such as prisoners, residents of 24-hour nursing facilities or anyone who is involuntarily confined.

Investigators whose research projects involve procedures which do not fit within an exempt category will be asked to complete the ISU New Human Subjects Review Form.

Investigators conducting research that fits into the exempt categories of research are not required to obtain a volunteer's consent to participate using an informed consent document containing all of the elements of consent. However, the IRB requires that the following items be included in an informed consent document or letter of introduction: a statement that the project involves research; a statement that participation is voluntary; a statement that the participant may skip any questions they do not feel comfortable answering in a survey; and the measures that will be used to ensure confidentiality of data collected in the research.

☐ **Education Practices:** Research conducted in established or commonly accepted educational settings, involving normal educational practices is exempt when:

- ☐ research is on regular and special education instructional techniques, **or**
- ☒ research is on the effectiveness of, or the comparison among, instructional techniques, curricula, or classroom management methods.

☒ **Educational Tests:** Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement) is exempt if:

- ☒ in the researcher's private data (including field notes), as well as in any published material, information taken from these sources is recorded in such a manner that subjects *cannot* be identified, directly or through identifiers linked to the subjects; **or**
- ☒ the information, if disclosed outside of the research, could *not* reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing, employability, or reputation.

- ☒ **Surveying or Interviewing:** Research involving, or interview procedures of, adult-aged subjects is exempt if:

- ☐ in the researcher's private data (including field notes), as well as in any published material, *responses are recorded anonymously* and in such a manner that the human subjects *cannot* be identified, directly or through identifiers linked to the subjects; **or**
- ☒ the responses, if disclosed outside of the research, could *not* reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing, employability, or reputation.

This exemption does not apply if the subjects are minor children or other vulnerable participants.

- ☐ **Public Observations:** Research involving observation of public behavior is exempt if:

- ☐ in the researcher's private data (including field notes), as well as in any published material, information taken from these sources is recorded in such a manner that subjects *cannot* be identified, directly or through identifiers linked to the subjects; **or**
- ☐ the information, if disclosed outside of the research, could *not* reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing, employability, or reputation.

This exemption applies to research involving minor children only when the investigator does not participate in the activities observed. Workplace meetings and activities, as well as classroom activities, are not considered "public behavior."

- ☐ **Public Officials:** All research involving educational tests, survey or interview procedures, or public observations is exempt when the respondents are elected or appointed public officials or candidates for public office.

Managers and staff in public agencies are not "public officials" in most cases.

- ☒ **Existing Data:** Research involving the collection of existing data, documents, records, pathological or diagnostic specimens is exempt if:

- ☒ these sources are publicly available, **or**
- ☐ in both the researcher's private data (including field notes) and in any published material, the information is recorded by the researcher in such a manner that subjects *cannot* be identified, directly or through identifiers linked to the subjects.

- ☐ **Taste and Food Quality:** Research on taste and food quality evaluation and consumer acceptance studies is exempt if:

- ☐ wholesome food without additives will be used, **or**
- ☐ the food does not contain a food ingredient that is at or below the level found to be safe, or agricultural chemical or environmental containment at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

III. PROTOCOL INFORMATION

1. Please outline the study procedures including a complete description of how subjects will be involved and what type of data collection method will be used. Include study dates, the number of individuals contacted to participate in the study, as well as the number of subjects actually enrolled in the study. Attach a copy of all data collection instruments including surveys, interview or focus group questions, etc.

The research will evaluate how design professionals collaborate on housing projects. In order to qualify for my research the individual must have finished a housing project in which they believe there was some level of collaboration between the field of Planning and Design. The data that will be collected will be conducted through a face to face interview process (with an option of audiotaping the conversation), focusing on individuals who have participated in collaborative design. The interview will be done in 1 hour. The case selection process will take place in three steps. First, I will identify three housing projects and the Architect who was involved. These, located in Kansas City, will profile collaborative design. Secondly, an email explaining the research and including the letter of information will be sent (see attachment 1 and 2). Once the Architect has been informed about the research, the third step will be to set up a face to face interview (see attachment 3). The last question of the interview will ask the Architect who their other collaborators for the project were, and if we can contact them (i.e. the Planner and Project Manager). At that point, another email and informational letter will be sent to those named. In the end, there will be three housing projects with no more than four participants from each, so I plan to conduct between nine and fifteen interviews for this research. I will begin the interview process in April and plan to be done with the data collection by June.

2. List characteristics of your study population (i.e., ages, student status, gender, ethnicity, etc.) and your rationale for choosing them for the study. (Studies with vulnerable populations such as children, adolescents, prisoners, or other institutionalized individuals are not eligible for exempt review.)

All participants in this research will be professionals in the field of Planning and Design with a focus on collaboration (i.e. planner, architect, project manager, etc.). Each participant will be an expert in their field and will be asked to answer questions directly related to their field of work. There will be no vulnerable populations in the study.

3. Describe any potential risk and assess its level of likelihood and seriousness. Risks could be physical, psychological, social, or legal and can include minor discomfort and/or embarrassment. Describe the procedures to be used for protecting against or minimizing any potential risk, including the risks to disclosure of confidentiality.

The risk involved in this research is no greater than everyday activity. An individual interview will be conducted asking for factual information and opinions related to their work. No personal nor confidential information will be solicited.

4. Describe the informed consent process to be used for the study. Attach copies of consent forms, information sheets and/or letters of introduction that will be used. Also attach any documents that will be used for advertising purposes.

The letter of information containing elements of informed consent (Attachement 2) and parameters of the research will be emailed to each prospective participants. The email will explain the hypothesis and the methods of research and the letter of information will explain how the interview process will work. All data and information will be collected by me, secured on a locked computer, and will not be available to others.

ISU IRB #1	09-124
EXEMPT DATE:	19 March 2009
Initial By:	jlc

ATTACHMENT #1

Hello.

My name is Kelsey Klein; I am a graduate student at Iowa State University. I am getting my masters degree in Community and Regional Planning as well as Architecture. I am writing a thesis on professional practice and the collaboration of Planning and Architecture, within large scale housing design.

I discovered you have done work in housing design that seems to have included some level of collaboration between Planning and Architecture.

I would like to contact you to explain more of about my research and opportunities to study your collaborative effort with other professionals related to planning. The consent form is attached to this email, please read it and if you are willing to learn more about this opportunity, please contact me at kjklein@iastate.edu

Thank you.

Kelsey J. Klein
Masters of Architecture
Masters of CRP

ISU IRB # 1	09-124
EXEMPT DATE:	19 March 2009
Initial By:	jlc

ATTACHMENT #2

INFORMATIONAL LETTER

Title of Study: Collaborative Design in Housing: Bridging the Gap between Planning and Architecture

Investigator: Kelsey Klein

INTRODUCTION

The purpose of this research is to learn how different entities are collaborating in order to develop urban infill housing. The goals and objectives of my research are to determine a framework for successful collaboration when designing housing projects. I hope when I have finished my research I have developed guidelines in which organizations can use to help implement collaboration within their organization. You are being invited to participate in this study because you are a professional who is involved with an organization that has done work with housing projects and has included some level of collaboration between the fields of Planning and Architecture.

If you agree to participate in this study I will ask factual questions as well as opinion based questions, all directly related to your professional field.

I will conduct a face to face interview with you that will last approximately one hour. Audio recordings may be used and will be erased immediately after my organization of the data.

If you decide to participate in this study it is hoped that the information gained in this study will benefit society by providing guidelines for future organizations to collaborate on housing projects.

Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time.

To ensure confidentiality to the extent permitted by law, the following measures will be taken: A secure lap top in which your interview answers are on will only be available to me, the sole researcher. The lap top will be secure in a locked studio office only accessible by key. If the results are published, your identity will remain confidential.

QUESTIONS OR PROBLEMS:

- For further information about the study contact Kelsey Klein at kjklein@iastate.edu or Tara Lynne Clapp at tlclapp@iastate.edu.
- If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office of Research Assurances, Iowa State University, Ames, Iowa 50011.

ISU IRB # 1	09-124
EXEMPT DATE:	19 March 2009
Initial By:	jic

ATTACHMENT #3

INTERVIEW QUESTIONS

2-11-09

1. What is the name of the project you worked on?
2. What was your job title on the project?
3. Please explain your professional values about design with respect to this project.
4. Please explain what you understand about your collaborators values?
5. PROMPT: Which goals and values did you share with your collaborators?
6. Were you aware of the projects' goals upfront? Or was there a process that made you familiar with the goals?
7. Did you know your collaborators before you began this project? Did you feel comfortable with one another?
8. How did you become familiar with your collaborators competency level?
9. Did you get to know them personally and professionally better throughout the project?
10. Please explain the governance that existed in your office, do you feel you had a strong sense of guidance? How did the governance affect the level of collaboration?
11. Were you clear of your responsibilities from the beginning of the project throughout?
12. Please explain the sense of leadership in this project, who was considered the leader?
13. PROMPT: Even though the leadership was present, do you feel your opinions were heard and considered in the decision making process?
14. Explain any new techniques of practice and innovation that were used in this project? How was it used?
15. Explain the places your collaborators used for discussion and decision making?

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16. What were the inter-organizational agreements and protocols that were used for clarifying responsibilities?
17. Please explain the information infrastructure that was used for this project (REVIT)?
18. PROMPT: Do you believe this type of system was successful in contributing to the collaboration?
19. What was your overall perception of the project?
20. Who are the other collaborators that were involved in this project that you feel would be important to this research?

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